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PORT OF MANCHESTER.

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ANNUAL REPORT

OF THE

Medical Officer of Health

TO THE

PORT SANITARY AUTHORITY,

1920.



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## Port of Manchester.

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TO THE CHAIRMAN AND MEMBERS OF  
THE MANCHESTER PORT SANITARY AUTHORITY.

GENTLEMEN,


It is my pleasure and privilege to present to you the Annual Report of the work accomplished under your jurisdiction during the year 1920. It will be noted that I have considered it advisable to deal at some length with the increased obligations placed upon your staff by the Infectious Diseases Regulations (1920), the Rats and Mice Destruction Act (1919), and the control of Venereal Disease.

I have the honour to be,

Yours faithfully,

W. F. DEARDEN,  
*Medical Officer of Health.*

Medical Officer's Department,  
168, Trafford Road, Salford,  
21st March, 1921.



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# Manchester Port Sanitary Authority.

The membership for the year was as follows :—

Sir THOMAS ROBINSON, M.P., Stretford U.D., *Chairman*.

Mr. Alderman J. EVANS, Borough of Warrington and R.D. of

Mr. Alderman W. T. Dagnall .. } Warrington, *Deputy-Chairman*.

Mr. Alderman C. Hornby ..

Mr. Alderman S. Dixon ..

Mr. Alderman A. W. Chapman } Manchester.  
(to November)

Mr. Councillor W. Davy ..  
(from November)

Alderman Sir Wm. Stephens, Kt., J.P.  
(to October)

Mr. Alderman E. Desquesnes ..

Mr. Alderman W. H. Barrett, J.P. ..

Mr. Alderman E. Mather (to October) } Salford.

Mr. Councillor McDougall ..  
(from November)

Mr. Councillor Luckarift ..  
(from November)

Mr. Alderman R. Evans .. } Borough of Eccles.  
.. } R.D. of Barton-upon-Irwell,  
.. } U.D. of Irlam.

Mr. Councillor Geo. Pilling, J.P. .. } U.D. of Lymm.  
.. } U.D. of Runcorn.  
.. } R.D. of Runcorn.  
.. } R.D. of Bucklow.

Mr. Alderman G. I. Neil, J.P. .. } Borough of Widnes.  
.. } R.D. of Chester.  
.. } R.D. of Wirrall.

The officials of the Authority are as follows :—

*Medical Officer of Health*—W. F. Dearden, M.R.C.S., L.R.C.P., D.P.H.

Telephones—Office, 114 Trafford Park ;

Residence, 416 Trafford Park.

*Clerk*—A. Holmes, Solicitor, Bexley Square, Salford. Tel. 5927 Central.

*Sanitary Inspectors*—H. Atkinson, C.S.M.F.I., ; W. Richmond, C.S.I.

*Food Inspectors*—J. Almond, C.S.M.F.I. ; Geo. Whalley, C.S.M.F.I.

*Medical Officer's Clerk*—Wm. Hodson.

„ „ *Junior Clerk*—Geo. Hadley.

*Offices* :—168, Trafford Road, Salford.

20, Norman Road, Runcorn.

## SICKNESS DURING THE YEAR 1920.

The total number of cases of Sickness reported during the year was 217.

Reported Sickness from 1898-20 inclusive.

1898	..	..	..	..	65
1899	..	..	..	..	46
1900	..	..	..	..	71
1901	..	..	..	..	89
1902	..	..	..	..	144
1903	..	..	..	..	124
1904	..	..	..	..	159
1905	..	..	..	..	109
1906	..	..	..	..	174
1907	..	..	..	..	162
1908	..	..	..	..	138
1909	..	..	..	..	132
1910	..	..	..	..	122
1911	..	..	..	..	143
1912	..	..	..	..	188
1913	..	..	..	..	109
1914	..	..	..	..	103
1915	..	..	..	..	155
1916	..	..	..	..	151
1917	..	..	..	..	109
1918	..	..	..	..	334
1919	..	..	..	..	254
1920	..	..	..	..	217

Cases of Sickness of all kinds have been notified, as usual, by the Liverpool Port Sanitary Authority, the Manchester Ship Canal Co., H.M. Customs, Shipowners and Medical Practitioners, but the bulk of information has been obtained by the Inspectors during their visits to the vessels in port.

Infectious cases are dealt with separately in Table IV., and non-infectious sickness, injury and death in Table V.



## INFECTIOUS DISEASES.

The diseases notifiable to the Authority under this heading are Smallpox, Scarlet Fever, Diphtheria, Membranous Croup, Enteric Fever (Typhoid and Paratyphoid), Pneumonia, Cholera, Plague, Puerperal Fever, Cerebro-Spinal Fever, Acute Poliomyelitis, Acute Polio-encephalitis, Encephalitis Lethargica, Typhus Fever, Relapsing Fever, Continued Fever, Trench Fever, Dysentery, Ophthalmia Neonatorum, Erysipelas, Tuberculosis, Malaria, Chickenpox, Measles, and Whooping Cough.

### PLAGUE.

A suspected case of Plague was removed to hospital at Piræus, from the s.s. "Tartar Prince." The vessel was quarantined and disinfected in Piræus and again at Alexandria.

### SMALLPOX.

Three cases occurred, two of which were removed to hospital at Manchester. In each of the latter the patient's quarters were subjected to thorough disinfection, and contacts were re-vaccinated.

### CHICKEN-POX.

Three cases were reported, one of which was removed to hospital at Manchester. The necessary disinfection was carried out.

### ENTERIC FEVER.

Six cases occurred on Manchester-bound vessels. Four of these were removed to hospital in Manchester, and in each case the patient's quarters were subjected to thorough disinfection.

## DIPHTHERIA.

One case was reported to have been removed to hospital at Falmouth, where the patient's quarters were disinfected.

## MEASLES.

Two cases were reported, one being removed to hospital at Montreal, and the second at Liverpool. In the latter case disinfection was carried out at Manchester.

## INFLUENZA.

Two cases were reported, both of which were removed to hospital at Runcorn, and the patients' berths subjected to disinfection.

## ERYSIPELAS.

Three cases occurred on Manchester-bound vessels. Two cases were removed to hospital in foreign ports, the third case being cured on the homeward passage. In the latter case disinfection was done in Manchester.

## MALARIA.

Eight cases were reported, two of which entered the Port. One case was removed to hospital at Manchester, the patient's quarters being disinfected.

## PHTHISIS.

Two cases were reported, one being removed to hospital at Norfolk, Va., the second, on a canal boat, was being treated on board.

# CHOLERA, PLAGUE AND YELLOW FEVER.

There has been no outbreak during the year under this heading, either in the Port or on Manchester bound vessels.

The following Table shews the Ports having communication with Manchester that have been considered as infected during the year with either Plague, Cholera or Yellow Fever, also the total number of vessels from each Port of Departure classed as infected under the particular heading.

Name of Country and Port.	Number of Vessels from Ports of Departure Infected with		
	Plague.	Cholera.	Yellow Fever.
EGYPT :			
Alexandria .. ..	28	28	..
Port Said .. ..	I	I	..
INDIA :			
Calcutta .. ..	4	4	..
Karachi .. ..	I	I	..
TOTALS .. ..	34	34	..

## PORT SANITARY AUTHORITIES (INFECTIOUS DISEASES) REGULATIONS, 1920.

The extent and limitations of the powers of a Port Medical Officer in connection with the administrative control of infectious disease were discussed in the last annual report, when dealing with the distressing circumstances following the removal of four smallpox contacts, from a vessel within the Port, without the knowledge or approval of your Medical Officer.

It is highly satisfactory to note that the issuing of this Order has entirely removed the disabilities mentioned in this connection, and has indeed conferred a very real power upon the Medical Officer in dealing with both ships and contacts. Really the enormously increased prevalence of smallpox and typhus in foreign ports, following upon the War, rendered an improved control exceedingly urgent. These augmented powers necessarily mean increased responsibilities for the Administrative Officer, and will obviously and very properly create a great demand for personal attention to incoming ships.

The Regulations, which are made in accordance with the Public Health Acts, 1875 and 1896, and the Public Health (London) Act, 1891, may be said, broadly, to give greater powers to Port Medical Officers in their efforts to prevent the importation and spread of any epidemic or acute infectious disease. They are quite independent of the Cholera, Plague and Yellow Fever Regulations.

A Port Medical Officer can now make any necessary examination of individuals or quarters when he has reason to suspect that any case of infectious disease may be on board a ship or that persons on board have been exposed to infection during three weeks previous to arrival, and for the purpose of such examinations he will be able to detain any ship, detain any person on board, or order the removal of any person to an appointed place on shore.

Power is given to prohibit any person from leaving the ship, save under conditions specified in writing by the Medical Officer of Health. If regarded as necessary, the Medical Officer of Health can



order the cleansing and disinfecting of the contacts themselves as well as their clothing.

Apart from persons suffering from, or who have been in contact with infectious disease, the Medical Officer of Health can examine and deal with any person or ships' quarters infested with lice or other vermin. He can also cause any person suffering from an infectious disease to be removed to hospital, or can prohibit removal if the patient is unfit. A somewhat special feature of the Order is that the Medical Officer, though in the main given considerable discretion, must exercise any or all of these extended powers if so required by the Ministry or his own Authority.

The Port Sanitary Authority is authorised to provide or arrange for hospital accommodation, also for premises for the purpose of medical examination, or for the cleansing, disinfecting or disinfesting of persons, clothing and other articles, and for means of transport.

Apart from notification of actual infectious disease, it is now an obligation on the Master of any ship to forthwith notify to the Medical Officer of Health any conditions likely to lead to infection or the spread of infectious disease, including particulars respecting the sanitary condition of the ships, the presence of dead rats, and any mortality or sickness among rats on board, to supply any information, fulfil any direction or requirement of the Sanitary Authority or the Medical Officer of Health, and to give the Medical Officer all necessary assistance in carrying out his duties. The definition of "Master" includes "Pilot" or any officer in charge for the time being.

This obligation respecting information and following out the requirements of the Medical Officer extends to every person on the ship.

The Authority is given power to appoint assistants, Medical and otherwise, to the Medical Officer of Health. Circular 107 of the Ministry, explanatory of these regulations, states that "the question as to the amount of assistance which the Medical Officer of Health will require must be determined by reference to the circumstances of each Port, but it is considered essential for the due performance of

the requirements of the Regulations, that the Medical Officer, or an assistant or deputy, should be in readiness to attend without delay any ship arriving in the Port, and that the services of an Inspector of Nuisances should at all times be available when required."

For a breach of the Regulations there is a penalty not exceeding £100, and a further penalty not exceeding £50 for each day the offence continues. It may be noted that under the Authority's Bye-laws the maximum penalty obtainable was 40s.

If this Order is carried out in the manner apparently intended by the Ministry of Health, apart from the increased responsibilities placed upon the Medical Officer there must necessarily be a considerable increase in the financial obligations of the Port Sanitary Authority.

Though certain equipment may be required in cases of emergency only, it is none the less necessary to have always at hand whatever is needed to deal with any outbreak of infection whenever such may arise.

In view of the increase in requirements and expenses the Ministry of Health has made arrangements with the Treasury for a grant in aid of Port Sanitary expenditure at a rate not exceeding one-half of the approved net disbursements for all purposes. Application for this grant must be made to the Ministry.

At this Port satisfactory provision is made for hospital accommodation, ambulance and disinfection of quarters and clothing, but there are no arrangements existing which would provide for the disinfection or disinfestation of contacts. As accommodation of the kind required, although extremely useful to have, is not an every-day requirement by any Local Authority, pourparlers have taken place between your Medical Officer and the Medical Officer of Health for the Borough of Salford, with a view to arranging a scheme to meet the needs of both borough and port. The requirements have been agreed upon, and a tentative plan has been made for a station which could suitably be erected at Mode Wheel.

TABLE I.

The following Table gives the number of cases of sickness which were removed to various hospitals, other than those within the Port of Manchester, from Manchester bound ships :—

Removed to Hospital at Alexandria	..	..	5
„ „ „ Antwerp ..	..	..	1
„ „ „ Baltimore ..	..	..	1
„ „ „ Bahia Blanca	..	..	8
„ „ „ Barrow ..	..	..	1
„ „ „ Bierta ..	..	..	1
„ „ „ Castellon ..	..	..	1
„ „ „ Christiansund	..	..	7
„ „ „ Falmouth ..	..	..	2
„ „ „ Galveston ..	..	..	2
„ „ „ Gibraltar ..	..	..	1
„ „ „ Halifax ..	..	..	1
„ „ „ Liverpool ..	..	..	2
„ „ „ Las Palmas	..	..	1
„ „ „ Malmo ..	..	..	2
„ „ „ Melbourne ..	..	..	1
„ „ „ Montreal ..	..	..	1
„ „ „ Norfolk, Va.	..	..	2
„ „ „ New York ..	..	..	1
„ „ „ Philadelphia	..	..	1
„ „ „ Piræus ..	..	..	1
„ „ „ Port Arthur	..	..	2
„ „ „ Queenstown	..	..	1
„ „ „ Southampton	..	..	1
„ „ „ St. John's ..	..	..	1
„ „ „ Sydney, C.B.	..	..	1
„ „ „ Trondjheim	..	..	1
„ „ „ Tunis ..	..	..	1
TOTAL ..			<u>51</u>

TABLE II.

The number of cases removed to Hospital within the Port of Manchester, was as follows :—

Removed to Hospital at Manchester and Salford ..	30
„ „ „ Runcorn .. ..	7
„ „ „ Warrington .. ..	1
	—
TOTAL .. ..	<u>38</u>

TABLE III.

In this Table are included those who died at sea from Sickness, together with those who lost their lives through drowning, etc. :—

Deaths at sea from Disease .. ..	11
Deaths from Drowning .. ..	2
	—
TOTAL .. ..	<u>13</u>



TABLE IV.—PARTICULARS OF CASES OF NOTIFIABLE INFECTIOUS DISEASE ON  
MANCHESTER-BOUND VESSELS.

Date	Name of Vessel	Where from	Where Inspected	Sickness	REMARKS
Jan. 5	s.s. "Birchol"	Liverpool	Irwell Park Wharf.	Measles	A sailor was removed to hospital, at Liverpool. Disinfection was carried out in Manchester.
" 10	s.s. "Tartar Prince"	Piræus and Alexandria.	Salford—8	Plague (Suspected)	An Arab fireman removed to hospital, at Piræus, on November 20th.
" 11	s.s. "Gwalia"	Gothenburg	Salford	Malaria	A sailor was removed to hospital, at Manchester. His quarters were disinfected.
" 13	s.s. "West Celina"	Portland, Oregon..	Mode-Wheel	Enteric Fever	The boatswain removed to hospital in Manchester. The necessary disinfection was carried out.
Feb. 11	s.s. "Brescia"	Alexandria	Salford—7	Erysipelas	A sailor was removed to hospital, at Alexandria, on January 8th, and rejoined the vessel on the 21st.
" 28	s.s. "Mourne"	Charlestown .. ..	Runcorn	Diphtheria	The second engineer was removed to hospital, at Falmouth, and his quarters subjected to disinfection.

TABLE IV. (continued).—PARTICULARS OF CASES OF NOTIFIABLE INFECTIOUS DISEASE ON  
MANCHESTER-BOUND VESSELS.

Date.	Name of Vessel	Where from	Where Inspected	Sickness	REMARKS
Feb. 28	Sch. "M. A. James"	Plymouth	Runcorn	Smallpox	The mate was removed to hospital, at Manchester, and the necessary disinfection carried out. All contacts were re-vaccinated.
ar. 4	s.s. "Brand"	Valencia and Castellon.	Salford—8	Smallpox	A sailor was removed to hospital, at Castellon, and the forecastles, etc., disinfected.
" 29	s.s. "Bovic"	New York	Salford—9	Chicken-pox	The second officer was removed to hospital, at Manchester. His berth was disinfected.
" 29	s.s. "Minnie de Larrinaga"	Galveston	Salford—9	Erysipelas	The cabin boy was removed to hospital, at Galveston, where disinfection was carried out.
" 31	s.s. "West Bridge"	Philadelphia	Salford—9	Malaria	An assistant cook had suffered from malaria during the last passage to Philadelphia.
April 9	s.s. "Rhode Island"	Philadelphia	Salford—8	Chicken-pox	A sailor was removed to hospital, at Philadelphia. His berth was disinfected.

TABLE IV. (*continued*).—PARTICULARS OF CASES OF NOTIFIABLE INFECTIOUS DISEASE ON  
MANCHESTER-BOUND VESSELS.

Date	Name of Vessel	Where from	Where Inspected	Sickness	REMARKS
April 12	s.s. "Arnabel-Mendi"	Valencia	Salford—3	Smallpox	The donkeyman was removed to hospital, at Manchester, and the necessary disinfection and re vaccination carried out.
" 12	s.s. "Walnut"	Cork	Ellesmere Port	Malaria	The mate was suffering from this disease.
May 6	s.s. "Maria de Larrinaga."	Galveston	Salford—9	Enteric Fever	A sailor was removed to hospital, at Norfolk, Va., and his berth disinfected.
" 12	s.s. "Tudor Prince"	Alexandria	Salford—8	Malaria	The assistant steward was removed to hospital, at Alexandria, where his berth, etc., were disinfected.
" 31	s.s. "Brescia"	Alexandria	Salford—8	Enteric Fever	The second officer was removed to hospital, at Alexandria, where his berth, etc., were disinfected.
August 19	s.s. "Syrian Prince"	Alexandria	Salford—8	Enteric Fever	The wireless operator was removed to hospital, at Manchester; his berth, etc., being disinfected.

TABLE IV. (*continued*).—PARTICULARS OF CASES OF NOTIFIABLE INFECTIOUS DISEASE ON  
MANCHESTER-BOUND VESSELS.

Date	Name of Vessel	Where from	Where Inspected	Sickness	REMARKS
August 20	s.s. "Manchester Mariner"	Montreal ..	Salford—8 ..	Measles ..	The second officer was removed to hospital, at Montreal. He rejoined the vessel eight days later. His berth was disinfected.
" 27	s.s. "San Eduardo"	Puerto Mexico ..	Barton ..	Enteric Fever ..	A seaman was removed to hospital, at Manchester. His berth, etc., were disinfected.
Sept. 1	s.s. "Manchester Merchant"	Norfolk, Va. ..	Salford—6 ..	Phthisis ..	The chief steward was removed to hospital, at Norfolk, Va., where the necessary disinfection was carried out.
" 15	s.s. "Tilia"	Kalmar, Sweden ..	Salford—6 Pier ..	Enteric Fever ..	A seaman was removed to hospital, at Manchester. His berth, etc., were disinfected.
Oct. 27	s.s. "San Dunstano"	Tampico ..	Barton ..	Malaria ..	An apprentice left the vessel at Barrow. He was reported to have been suffering from <i>malaria</i> .
" 29	s.s. "Irish Monarch"	Puerto Mexico ..	Irwell Park Wharf	Malaria ..	The third engineer was removed to hospital, at Norfolk, Va. His quarters were disinfected.



TABLE IV. (*continued*),—PARTICULARS OF CASES OF NOTIFIABLE INFECTIOUS DISEASE ON  
MANCHESTER-BOUND VESSELS.

Date	Name of Vessel	Where from	Where Inspected	Sickness	REMARKS
Nov. 9	s.s. "British Earl" ..	Port Arthur ..	Eccles ..	Malaria ..	The third mate and a seaman were removed to hospital at Port Arthur, where the necessary disinfection was carried out.
" 19	Barque "Ada" ..	Rio Grande ..	Runcorn ..	Influenzal Pneumonia.	A mess-room boy was removed to hospital, at Runcorn, and disinfection carried out.
" 20	s.s. "Nicolas" ..	Fowey ..	Weston Point ..	Influenzal Pneumonia.	A fireman was removed to hospital at Runcorn, and disinfection carried out.
" 30	s.s. "Harelda" ..	Antwerp ..	Salford—7 ..	Chicken-pox ..	The second officer was removed to hospital at Southampton, where his berth was disinfected.
Dec. 8	Sand-Grab "Deva" .	Eastham ..	Runcorn ..	Erysipelas ..	The engineer was reported to have suffered from this disease. His quarters were disinfected.
" 18	Canal boat "Tyne" .	— ..	Weston Point ..	Phthisis ..	The master's daughter was affected.

TABLE V.—PARTICULARS OF NON-NOTIFIABLE SICKNESS, INJURY, AND DEATH  
OCCURRING ON MANCHESTER-BOUND VESSELS DURING THE YEAR.

Date	Name of Vessel	Where from	Where Inspected	Sickness	REMARKS
Jan. 3	s.s. "H. M. Whitney"	Gothenburg and Malmo.	Runcorn	A stroke Injury to leg Gonorrhœa (two cases). Syphilis Diarrhœa Scabies Cold	Removed to hospital. Removed to hospital. Treated on board. Treated on board. Treated on board. Treated on board.
" 6	s.s. "Wakiki"	Portland, Oregon..	Salford—9	Venereal disease	Treated on board.
" 7	s.s. "Chenab"	West Coast of Africa.	Salford—9	Diarrhœa Bronchitis Debility (several cases) Scalp wound	Removed to hospital. Removed to hospital. Treated on board. Treated on board.
" 7	Flat "Lizzie"	Liverpool	Weston Point	Influenza	Left the vessel.
" 9	Canal boat "George"	—	Ellesmere Port	Severe cold	Treated on board.
" 15	s.s. "West Hartley"	Baltimore	Runcorn	Hernia	Transferred to s.s. "President Grand" whilst at sea, for operation. Treated on board.
" 21	Canal boat "Blackrock"	—	Ellesmere Port	Enlarged tonsils Cold (two cases)	Treated on board.
" 21	Canal boat "Amew"	—	Runcorn	Rheumatism	Treated on board.

TABLE V. (continued).—PARTICULARS OF NON-NOTIFIABLE SICKNESS, &C., ON MANCHESTER-BOUND VESSELS.

Date	Name of Vessel	Where from	Where Inspected	Sickness	REMARKS
Jan. 28	s.s. "Kaffir Prince"	Alexandria	Salford—7	Old bayonet wound	Removed to hospital.
Feb. 2	s.s. "City of Winchester"	Australia	Salford—9	Bronchial pneumonia	Died in hospital.
" 4	Flat "White Rose"	Chester	Ellesmere Port	Severe cold	Treated on board.
" 4	s.s. "Isanti"	Galveston	Salford—9	Ulcer in neck	Removed to hospital.
" 4	s.s. "Anton"	Gothenburg	Irlam	Venereal disease	Removed to hospital.
" 5	Canal boat "Arrow"	—	Weston Point	Cold	Treated on board.
" 6	s.s. "Merchant Prince"	Alexandria	Salford—7	Whitlow on the finger	Removed to hospital.
" 9	s.s. "Skotfos"	Drammen and Christiansund.	Salford—8	Influenza (seven cases.	Removed to hospital.
" 10	s.s. "Anselma de Larrinaga"	Galveston	Salford—8	Hernia	Removed to hospital.
" 13	Flat "Leader"	Liverpool	Ellesmere Port	Eczema	Treated on board.
" 14	s.s. "West Apaum"	Jacksonville	Salford—8	Venereal disease	Treated on board.
" 16	s.s. "Minerva"	Huelva	Salford	Venereal disease	Treated on board.
" 18	Flat "Winifred Abel"	Liverpool	Runcorn	Asthma & bronchitis.	Left the vessel.
" 28	s.s. "Manchester Division"	Halifax, N.S.	Mode Wheel	Pneumonia	Fatal, buried at sea.

TABLE V. (*continued*).—PARTICULARS OF NON-NOTIFIABLE SICKNESS, &C., ON MANCHESTER-BOUND VESSELS.

Date	Name of Vessel	Where from	Where Inspected	Sickness	REMARKS
March 1	s.s. "Edendale"	Melilla	Irwell Park Wharf.	Asthma	Treated on board.
" 1	Sch. "John Morrison"	Teignmouth	Runcorn	Accidental injury	Treated on board.
" 2	Sch. "Emily Warbreck"	Dieppe	Weston Point	Enlarged gland in neck	Treated on board.
" 3	s.s. "Pontic"	Manchester	Ellesmere Port	Laryngitis	Treated on board.
" 5	s.s. "Lake Michigan"	Brunswick	Salford	Phthisis	Treated on board.
" 18	s.s. "Sapphire"	Dublin	Astmoor Marsh	Gastritis	Left the vessel.
" 19	Sch. "Lizzie M. Parsons"	Rio Grande	Ellesmere Port	Venereal disease	Treated on board.
" 23	s.s. "Manchester Brigade"	Halifax, N.S.	Salford	Venereal disease	Removed to hospital.
" 23	Sch. "Baltic"	Garston	Runcorn	Influenza	Treated on board.
" 27	Flat "Persia"	Winsford	Weston Point	Tubercular growth	Treated on board.
April 6	Flat "Erick"	Liverpool	Astmoor Marsh	Rheumatism	Treated on board.
" 7	s.s. "Pickavance"	Hourdel	Weston Point	Drowning	Fell in dock.
" 9	s.s. "San Valerio"	Mexico	Barton	Venereal disease	Removed to hospital.
" 10	s.s. "Penrhyn"	Fowey	Weston Point	Boils	Treated on board.
" 13	s.s. "Collamer"	Norfolk, Va.	Grain Elevator	Wound on foot	Treated on board.



TABLE V. (continued).—PARTICULARS OF NON-NOTIFIABLE SICKNESS, &C., ON MANCHESTER-BOUND VESSELS.

Date	Name of Vessel	Where from	Where Inspected	Sickness	REMARKS
April 17	s.s. "Tonawanda"	Tampico	Davyhulme	Influenza (5 cases) Influenza	Treated on board. Died, and was buried at sea.
"	Sch. "Harkaway"	Dublin	Runcorn	Venereal disease	Treated on board.
"	Flat "Kingdale"	Liverpool	Ellesmere Port	Influenza .....	Treated on board.
"	s.s. "Fulmar"	Ghent	Acton Grange	Influenza cold	Treated on board.
"	s.s. "Shropshire"	Australia	Salford	Acute embritis Acute nephritis Epileptic fit	Died, and buried at sea. Died, and buried at sea. Died, and buried at sea.
May 3	s.s. "Nyroca"	Antwerp	Salford	Drowned	Fell overboard
"	s.s. "Arbeeco"	Treport	Runcorn	Venereal disease	Treated on board.
"	s.s. "Bombay"	South Shetlands	Runcorn	Unknown	Died at sea.
"	s.s. "Silvio"	Trondjheim"	Salford	Venereal disease	Removed to hospital.
"	s.s. "Hessa"	Riga	Salford Quay	Affection of the kidneys.	Treated on board.
"	s.s. "Catherina Aida"	Antwerp	Ellesmere Port	Swelling of thigh	Removed to hospital.
"	s.s. "Nyroca"	Rotterdam	Salford	Venereal disease (2 cases)	Left the vessel.
"	s.s. "Thysa"	Seville	Irwell Park Wharf.	Scalded foot	Removed to hospital.

TABLE V. (*continued*).—PARTICULARS OF NON-NOTIFIABLE SICKNESS, &C., ON MANCHESTER-BOUND VESSELS.

Date	Name of Vessel	Where from	Where Inspected	Sickness	REMARKS
May 29	Ketch "Annie"	Bideford	Runcorn	Influenza and bronchitis	Treated on board.
" 31	s.s. "Brescia"	Alexandria	Salford	Diarrhoea	Removed to hospital.
June 1	Canal boat "Speedwell"	—	Weston Point	Quinsey	Treated on board.
" 3	s.s. "Clematis"	Rosario	Salford	Jaundice	Treated on board.
" 3	Sch. "Zion Hill"	Truro	Runcorn	Venereal disease Apoplectic seizure	Removed to hospital. Fatal.
" 9	s.s. "Annie"	Manchester	Ellesmere Port	Accident to leg	Removed to hospital.
" 15	s.s. "Manchester Hero"	Montreal	Salford	Shingles	Treated on board.
" 19	s.s. "Manchester Mariner"	Montreal	Salford	Rupture	Fatal; was buried at sea.
" 21	s.s. "Whinfield"	Rosario	Grain Elevator	Jaundice	Removed to hospital.
" 29	s.s. "Asuncion de Larinaga"	Galveston	Salford	Phthisis	Treated on board.
" 30	s.s. "Bassa"	Bahia Blanca	Salford	Unknown	Eight of the crew removed to hospital at Bahia Blanca.
July 7	s.s. "Gyp"	Chicoutimi	Salford	Stricture	Removed to hospital.
" 24	Sch. "Katie"	Newquay	Runcorn	Accident to chest	Treated on board.
" 28	Canal boat "Muta"	—	Weston Point	Shingles	Treated on board.

TABLE V. (continued).—PARTICULARS OF NON-NOTIFIABLE SICKNESS, &C., ON MANCHESTER-BOUND VESSELS.

Date	Name of Vessel	Where from	Where Inspected	Sickness	REMARKS
July 30	s.s. "Narragansett"	New Orleans	Davyhulme	Severe cold (several cases)	Treated on board.
Aug. 3	s.s. "Hitteroy"	Trongsund	Ellesmere Port	Accident to leg Blood poisoning	Treated on board. Treated on board.
" 6	Sch. "Nellie Bywater"	Poole	Runcorn	Lumbago	Treated on board.
" 9	s.s. "Strathfillan"	New York	Davyhulme	Appendicitis	Removed to hospital.
" 14	Sch. "Eilian"	Dublin	Runcorn	Accident to foot	Treated on board.
" 17	s.s. "Gothic"	La Plata	Salford	Lumbago	Treated on board.
" 17	s.s. "Manchester Importer"	New Orleans	Salford	Accident	Treated on board.
" 17	Canal boat "Three Brothers"	—	Weston Point	Poisoned wound	Treated on board.
" 21	s.s. "Bovic"	New York	Salford	Rheumatism	Treated on board.
" 23	s.s. "Rembrandt"	River Plate <i>via</i> New York	Salford	Pneumonia (2 cases)	Both fatal, and buried at sea.
" 23	s.s. "West Lianga"	New Orleans	Salford	Hernia	Treated on board.
" 24	s.s. "Gulf of Suez"	Mediterranean Ports	Salford	Syphilis	Paid off.
" 28	s.s. "Lake Galewood"	Baltimore	Salford	Jaundice	Treated on board.

TABLE V. (continued).—PARTICULARS OF NON-NOTIFIABLE SICKNESS, &C., ON MANCHESTER-BOUND VESSELS.

Date	Name of Vessel	Where from	Where Inspected	Sickness	REMARKS
Sept. 7	s.s. "Mahsud"	Calcutta <i>via</i> Glasgow	Salford	Severe cold Accident	Treated on board. Treated on board.
" 9	Sch. "Maolen"	Rio Grande	Runcorn	Beri beri	Removed to hospital.
" 13	s.s. "Chateau Salins"	Oran	Pomona	Severe cold	Treated on board.
" 14	s.s. "City of Rangoon"	Australia	Salford	Beri beri (21 cases)	One fatal, and buried at sea; 16 removed to hospital at Manchester; four treated on board. Fatal, and buried at sea.
" 17	s.s. "River Fisher"	Fowey	Runcorn	Eczema	Treated on board.
" 21	s.s. "Labette"	Baltimore	Salford	Venereal disease	Removed to hospital.
" 23	s.s. "Yeoman"	Port Talbot	Salford	Gastralgia	Treated on board.
" 27	Sch. "Dispatch"	Poole	Runcorn	Venereal disease	Treated on board.
Oct. 12	Ketch "Hetty"	Bideford	Runcorn	Venereal disease	Treated on board.
" 14	s.s. "Syrian Prince"	Alexandria	Salford	Inguinal hernia	Removed to hospital.
" 19	s.s. "Salient"	Buenos Ayres	Salford	Rheumatism	Removed to hospital.
" 27	s.s. "San Dunstano"	Tampico	Barton	Enlarged gland	Left the vessel.
" 29	s.s. "West Hartley"	Baltimore	Salford	Pleurodynia	Removed to hospital.



TABLE V. (*continued*).—PARTICULARS OF NON-NOTIFIABLE SICKNESS, &C., ON MANCHESTER-BOUND VESSELS

Date	Name of Vessel	Where from	Where Inspected	Sickness	REMARKS
Nov, 2	s.s. "Ringhorn"	Sundsvall	Warrington	Accident Severe rash	Treated on board. Treated on board.
" 5	Canal boat "La Bassee"	—	Ellesmere Port	Blood poisoning	Treated on board.
" 8	s.s. "Harbinger"	Treport	Weston Point	Boils	Treated on board.
" 12	Sch. "Pacific"	St. Valery	Weston Point	Intestinal obstruction	Fatal; buried at sea.
" 12	Ketch "Hannah"	Jersey	Weston Point	Septic poisoning	Put ashore at Milford Haven.
" 17	s.s. "West Raritans"	Dairen (Dalny)	Salford	Pleurisy Venereal disease	Treated on board. Removed to hospital.
" 19	Barque "Ada"	Rio Grande <i>via</i> Santos	Runcorn	Heart failure Beri beri Pneumonia Beri beri	Fatal; buried at sea. Fatal; buried at sea. Removed to hospital—fatal. Five cases removed to hospital, at Runcorn; two received treatment on board; several cases cured on passage.
" 22	" "	"	"	Inflammation of kidneys Bronchitis	Treated on board.
" 23	s.s. "Leopold L.D."	Roumania	Salford	Gastritis	Treated on board.
" 29	Canal boat "Mons"	—	Ellesmere Port	Ulcerated stomach	Removed to hospital.
" 29	s.s. "Velinheli"	Port Dinorwic	Runcorn	Biliousness	Treated on board.

TABLE V. (*continued*).—PARTICULARS OF NON-NOTIFIABLE SICKNESS, &c., ON MANCHESTER-BOUND VESSELS.

Date	Name of Vessel	Where from	Where Inspected	Sickness	REMARKS
Nov. 29	s.s. "Tyria"	Mediterranean Ports	Salford	Religious mania	.. Removed to hospital.
Dec. 1	Flat "Trida"	Winnington	Runcorn	Abscess Catarrh of throat	.. Treated on board. .. Treated on board.
"	Flat "Japan"	Weston	Weston Point	Rheumatism	.. Treated on board.
"	m.s. "Sophia"	Liverpool	Runcorn	Biliousness	.. Treated on board.
"	s. flat "Sand Mail"	Eastham	Widnes	Severe cold	.. Left the vessel.
"	Canal boat "Pleiades"	—	Ellesmere Port	Poisoned wound	.. Treated on board.
"	s.s. "Nicolas"	—	Runcorn	Cardiac valvular disease.	Fatal.
"	s.s. "Glenshiel"	Alexandria	Salford	Affection of the heart.	Treated on board.
"	Barque "Ada"	Rio Grande <i>via</i> Santos	Runcorn	Pleurisy	.. Removal to hospital.

## THE PUBLIC HEALTH (VENEREAL DISEASES) REGULATIONS, 1916.

The serious attempt at administrative control of venereal disease, which has necessarily been brought into being to deal with this after-scourge of the Great War, is exciting a considerable amount of public interest at the present time. It would therefore appear to be quite appropriate that this Report should contain some brief explanation of the position and obligations of Port Sanitary Authorities towards the importation of this class of disease, and should describe the methods adopted by your staff to assist those sailors who have contracted the infection.

Provision for dealing with venereal disease and its victims is contained in the Public Health (Venereal Diseases) Regulations, 1916, which were issued by the late Local Government Board, in accordance with powers possessed by Government to make regulations for combating infectious disease.

By these Regulations, backed up by assistance from the Treasury, practical effect has been given to certain definite recommendations made in the Final Report issued by the Royal Commission on Venereal Diseases.

The principles laid down were :—

- (1) That any medical practitioner should be able to obtain, free of cost to himself, a scientific report on material obtained from a patient suspected to be suffering from a venereal disease, also supplies of Salvarsan or its substitutes for purposes of treatment ;
- (2) That free treatment at and in hospitals should be available for those suffering.



County and County Borough Councils administer the Regulations, and the State pays 75% of the cost of carrying out schemes which have been duly approved by the Ministry of Health. The arrangements made are under the control of the Medical Officer of Health. Laboratory facilities are provided and arrangements made with hospitals for establishing clinics and providing such in-patient accommodation as is deemed necessary. All cases are treated, without respect to place of residence or amount of means ; frequency and times of clinics are fixed to suit popular convenience ; names and addresses of patients are not divulged, and all information obtained from patients is regarded as confidential ; general hospitals are regarded as most suitable for the clinics, the latter being so designated as not to specifically indicate their special nature. The spreading of information respecting these diseases is also an important feature of the programme.

All these facilities for treatment are available for seamen of any nationality who may have landed in or travelled to a district where such have been established, but a Port Sanitary Authority, as such, is not a local authority called upon to make any of these provisions. Port Sanitary Authorities are however expected to act an important part in the general campaign against these diseases by utilising their resources to find out who amongst a ship's crew are so suffering upon arrival in port and by guiding them in the right path for proper treatment.

The practice in this port is as follows. The Port Sanitary Inspector, when visiting a vessel on arrival, ascertains who have been suffering from sickness during the voyage, and the nature of the sickness. In this way he is made aware of the cases of venereal disease known to the officer in charge, though not necessarily of the identity of the individual. Under any circumstances the ship's officer is supplied with a copy of Form V14 (Leaflet for seamen), giving information respecting the dangers following promiscuous sexual intercourse, the facilities for treatment of those infected, and the importance of easy and continuous treatment, also two copies of the special circular issued by the Authority, which gives the



necessary information respecting the free treatment centres at Manchester, Salford, Warrington, Liverpool, Birkenhead, Wallasey and Winsford. The latter he is asked to have fixed up in the sailors' and firemen's quarters. Additional copies of the two publications are supplied for the personal study of any sailors on board who are infected. The Inspector requires to utilise a considerable amount of tact in getting the local information leaflet hung up in the forecastles, as some of the occupants take exception on the ground that its presence reflects on the morality of their community. He is, however, on the whole, quite successful in convincing them that nothing of that nature is intended or to be implied, and that if any of their number should then or in the future be suffering its utility would far outweigh the purely sentimental objection. It is suggested by the Ministry that it may prove useful to have information circulars printed in various languages, and although this method has not so far been adopted its possibilities are not being overlooked.

The most unfortunate factor in connection with the treatment of sailors, and one extremely difficult to deal with, is the practice of clearing off on another voyage as soon as acute symptoms have disappeared and before definite cure can have been effected. It has therefore been brought prominently before them that they must realise it as an urgent necessity to go for treatment immediately upon arrival at the next port, and carry on this practice until they are told by the doctor in charge that they are cured. On the local circular, in large type and printed in red, sailors are informed as follows :— "Sailors should call at the Port Sanitary Authority's office for a Treatment Card," ; "If you do not finish a course of treatment at one port, continue it at the next" ; "Treatment should not be stopped until the doctor gives his consent." The Treatment Card, Form V15, is issued by the Ministry of Health, and is a strong double card with a double paper sheet inside. The inside provides spaces for diagnosis, date of first attendance, particulars of laboratory tests and treatment at various centres ; one page is devoted to space for names and addresses of hospitals at various ports where treatment can be continued.

A sailor on obtaining his card goes to the centre selected and hands it to the Medical Officer, who makes the essential entries. When he leaves the neighbourhood it is anticipated that the Medical Officer will be able to enter up on the card the name and address of the nearest centre to his destination, or, if shipping for another voyage, that this information will be provided at the Port Sanitary Authority's Offices. It is understood that the Ministry is obtaining information respecting the established centres for treatment at foreign ports, and that full particulars will be transmitted to Port Medical Officers here in due course. There appears to be no doubt that the mode of procedure adopted in this Port has been of good effect. The information appears to get to the right quarter, and it is now quite an ordinary occurrence for a man to call for a Treatment Card.

There can be no two opinions about the importance of adopting all possible preventative measures against the bringing in of infection at the ports themselves, a special argument with these diseases being our knowledge of the risk of any particular case importing a specially virulent type. Some authorities whose opinions are entitled to every respect strongly advocate the necessity of notification to the Port Medical Officer, and the establishment of compulsory treatment. Obviously such methods if workable would be ideal, but as measures enforced would necessarily apply to passengers as well as crews, and as probably the principal inducement to the adoption of modern methods of treatment is the guarantee of secrecy being maintained, it seems quite certain that it would be extremely difficult to get this plan adopted, and if adopted, that the natural objection to be labelled as an immoral person, whether deserved or not, would lead the individual, in his efforts to keep his secret, to avoid the very place he is being induced to enter, viz., the treatment centre. It would therefore appear that the correct policy, for the time being, is to concentrate on the information and education programme.

During the month of August the Ministry issued a circular letter to certain counties, county boroughs, etc., recommending consideration to the possible advantages to be derived by providing



readily accessible special clinics for seamen, which would be open at times most suitable to the patients or kept open continuously. Port Sanitary Authorities were asked to co-operate with local authorities in work of this special nature. The Manchester Corporation was one of the local authorities invited to consider this proposition, and the Medical Officer of Health for the City very kindly forwarded particulars and asked for the views of the Port Sanitary Authority. Your Medical Officer devoted considerable attention to the subject, and, in the course of a Report made to the Authority, brought out certain local factors which tended to shew that the special clinic for sailors would not be worth establishing under existing conditions.

As regards the general question of provision for this special accommodation, it was pointed out that at any rate so far as the Port of Manchester is concerned, comparatively few sailors actually live on vessels in dock. Roughly speaking about 80 per cent. of the crews entering the Port are British and about 20 per cent. foreigners. As regards British ships finishing a voyage, the crews of those docking before 12 noon are paid off the same day and immediately leave, but if the arrival be after 12 noon, they stand by for the night and are paid off the following morning.

One cannot quite understand what advantage a clinic at the dock gates would be to members of a paid-off crew unless their homes or lodgings happen to be close at hand, and they do not object to be seen by their neighbours in regular attendance at an institution whose purpose would be well known. Although treatment brought to the doorstep is handy, it cannot be specially effectual unless the patient is available and can continue to utilise it. A single treatment immediately upon leaving the ship could not be claimed as a real advantage. The infected sailor must find and use a clinic where he can take a course of treatment. The population of British ships in dock consists of officers and engineers who are not on leave, but who may be sleeping at home, and probably a donkeyman, a steward and a cook. Lascars and Chinamen live on board. If a British vessel has not completed its voyage, but is to proceed to and be paid-off at another port in this country, the crew, of course, stays on the ship,

leave to go ashore being granted at the discretion of the Captain; but not many of the vessels using the Port come under this heading.

On coasting vessels, the crews are paid a standing wage and provide their own food. As a rule they are sailors who have settled down to domestic life, and live at home when the ship is in their home port. They are not a class likely to be much affected with venereal disease.

It appeared to your Medical Officer that the suggested accommodation would be a provision for sailors (mostly foreign) who are not paid-off in Manchester, and live on board ship whilst in port. Consideration was given to the number of these (about seven thousand in the year); the prevalence of venereal diseases amongst them and the accessibility of existing clinics.

At present the centres for treatment nearest to the docks are :—

Salford Royal Hospital—about  $1\frac{1}{4}$  miles distant.

Manchester Lock Hospital—about  $1\frac{1}{4}$  miles distant.

Manchester Skin Hospital—about  $1\frac{1}{2}$  miles distant.

Ancoats Hospital and the Royal Infirmary are much further away.

Information was sought respecting the extent to which seamen utilise the existing centres for treatment in Manchester and Salford.

It was regarded of importance to ascertain the total number of sailors taking treatment during a specified period, their nationality, and whether living on vessels in dock or at a shore address.

Through the kindness of Dr. Niven the following information was obtained respecting the number of sailors treated at the Manchester Clinics from January 1st to September 18th of the current



(a) The total number of sailors *not living in Manchester* who received treatment :—

	M/c. Royal Infirmary	Ancoats Hospital	Skin Hospital	Lock Hospital	Total
(1) British and Colonial..	5	6	6	4	21
(2) Hindoos, Lascars, &c.	2	—	—	—	2
(3) Chinese .....	—	—	—	—	—
(4) Other nationalities ..	5	—	2	8	15
					<u>38</u>

(b) The total number of sailors *who live in Manchester* and who went for treatment :—

	M/c. Royal Infirmary	Ancoats Hospital	Skin Hospital	Lock Hospital	Total
	—	—	3	12	<u>15</u>

It will be noted that the information under (a) does not specify where the sailors were residing, so that it can only be inferred that a considerable proportion of them were living on board ship. Some of the British would undoubtedly be residing at Seamen's lodging-houses in Salford. If, however, the whole of the thirty-eight had been living on board ship, the smallness of the number clearly indicate that it would not be an economical proposition for Manchester to establish and equip a venereal centre adjacent to Pomona, where No. 1 Dock and the adjacent river wall are the only portions of the Port within the City area.

Dr. C. H. Tattersall was good enough to make enquiries at the Salford venereal centre. The information available, which did not include nationality, showed that, from January 1st to September 30th, the total number of seamen treated was seventy-eight. Of this number sixty-nine were living on ships within the Docks and nine were not. Dr. Tattersall was also good enough to supply me with a list of Seamen's lodging-houses in Salford. The total number these are registered to accommodate is 245, and most of the houses are quite close to the docks.

In view of the information supplied the Authority decided not to recommend the establishment of a special clinic for sailors.

## DESTRUCTION OF RATS WITHIN THE PORT.

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The Rats and Mice (Destruction) Act, 1919, came into operation on the 1st January, 1920. Under its provisions, the Master of a ship is regarded as responsible for keeping his vessel clear of rats and mice, and to effect this must regularly practice methods of destruction against those on board, and adopt means of preventing escape to shore, or entry of new arrivals.

An Authority can publish instructions respecting the most effective methods which can be adopted to this end, and apparently the failure to carry out any instructions issued would form the basis of any necessary action by the Authority. [The Master can be prosecuted for not taking the necessary repressive measures, or be served with a notice to disinfest his ship within a given time, or with a notice to the effect that after 24 hours the Authority will disinfest at his expense.

It appeared to your Medical Officer that the first step to be taken with a view to obtaining a proper observance of the Act would be to explain clearly to all owners, agents and masters of ships using the Port, the exact nature of the new obligations.

The following information was printed on a tabbed and eyeletted card, and copies were forwarded to all owners and agents concerned, others being left with the masters of ships, on arrival in port. The former were asked, in addition, to state what steps they were taking to keep their ships clear of rats.

“RATS AND MICE (DESTRUCTION) ACT, 1919.

“This Act came into operation on 1st January, 1920.

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“PENALTIES FOR FAILURE TO DESTROY RATS AND MICE.

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“Any person who shall fail to take such steps as may from time to time be necessary and reasonably practicable for the destruction of rats and mice on or in any land of which he is the Occupier, or for

“preventing such land from becoming infested with rats and mice, shall  
 “be liable on summary conviction to a fine not exceeding Five Pounds,  
 “or where he has been served with a Notice under this Act requiring  
 “him to take such steps, not exceeding Twenty Pounds.

“The expression ‘Occupier’ means, in the case of land not occupied  
 “by any Tenant or other person, the Owner of the land.

“The expression ‘Land’ includes any buildings, and any other  
 “erection on land, and any cellar, sewer, drain or culvert in or under  
 “land.

This Act shall apply to a Vessel as if the Vessel were ‘Land’ and  
 “the Master of the Vessel shall be deemed to be the ‘Occupier’ thereof.

“Nothing in this Act contravenes the powers possessed by the Port  
 “Sanitary Authority to deal with rats as a preventive measure against  
 “Plague, under which obstruction to an Officer of the Authority  
 “involves a penalty not exceeding £100, with an additional £50 for each  
 “day the obstruction continues.

#### “METHODS OF DEALING WITH RATS ON SHIPBOARD.

“The most effective method for destroying rats on shipboard is by  
 “fumigation with Sulphur Dioxide gas, and this method will be insisted  
 “upon when a vessel is considered to be definitely infested.

“To prevent a vessel becoming infested, it is essential that arrange-  
 “ments should be made for systematic trapping every time a vessel is  
 “in port ; whilst at sea, the use of traps should be continued, or baits,  
 “treated with Barium Carbonate and Squills, prepared and laid down.  
 “Proprietary preparations of the latter can be purchased along with full  
 “directions respecting use. Messrs. Boots’ ‘Rami’ is reliable and  
 “easily obtained.

“Ship’s stores and gear should be moved periodically to counteract  
 “harbouring ; refuse, excepting ashes, should not be allowed to  
 “accumulate on deck when in port. Galley refuse and old bedding  
 “should be burnt.

“Rat Guards must be fixed on the mooring ropes of all vessels from  
 “‘Infected’ Ports, and it is strongly recommended that other vessels



“adopt this precaution. Gangways should be efficiently lighted at night.

“The keeping of cats on board ship is recommended.

“Trapped rats must be drowned and then burned.

“No rats must be taken outside the dock gates either dead or alive.

“Reliable rat catchers will be authorised by the Port Sanitary Authority, and as a condition of such authorisation will be required to produce certificates signed by an officer in charge to the effect that rats trapped by them have been satisfactorily destroyed.

“It is not advisable to directly handle dead rats ; they should be lifted on a shovel and thrown into a boiler furnace.

“Any increase in the number of rats seen on a ship, or the finding of a succession of dead rats, should be immediately reported to the Port Medical Officer.

“Any further information respecting the obligations under this Act may be obtained on application at the Offices of the Authority, 168, Trafford Road, Salford.

“W. F. DEARDEN,

“Medical Officer of Health.”

Though some of the firms replied fully, the communication for the most part produced an acknowledgment and a promise to look into the matter. After allowing such time for enquiry and investigation as might reasonably be considered as sufficiently ample for obtaining the required amount of knowledge on the subject, the owners and agents were again written to and asked to supply certain definite information by answering the following queries :—

“1. Have you made arrangements for systematic trapping each time your vessels visit this Port ?

“2. Name and address of ratcatcher employed ?



- “3. Do your agents at foreign ports employ ratcatchers ?
- “4. If so, where ?
- “5. Is trapping carried out at sea ?
- “6. Are baits, treated with Barium Carbonate or Squills, or both, “regularly used when at sea ?
- “7. Are particulars kept of the number destroyed at sea or in “ports of call ?
- “8. Are these particulars entered up in the ship’s log ?
- “9. Are your vessels supplied with rat-guards for mooring ropes ?
- “10. Have you given instructions to Masters of your vessels “respecting the carrying out of the recommendations of the “Port Sanitary Authority with respect to :—
- “(a) Frequent moving of ship’s stores and gear ?
  - “(b) Clearing away refuse of all kinds ?
  - “(c) Fixing of rat-guards ?
  - “(d) Lighting of gangways at night ?
  - “(e) Burning of dead rats ?
  - “(f) Certifying the number of rats caught ?
  - “(g) Notifying the finding or dead rats ?
  - “(h) Notifying the prevalence of live rats ? ”

The replies from every firm were tabulated under the different numbered headings, the whole document forming a comprehensive record of what was being done at the time of the enquiry. Most firms had existing arrangements for trapping in home ports and had given instructions to Masters to carry out the recommendations of the Authority ; trapping at sea appeared to be common, and use of baits not so common.

Apart from awakening the owners and agents to a sense of their responsibilities, the Inspector obtains the following specific information from the Master or Officer in charge of each ship on entering the Port :—

## RATS AND MICE (DESTRUCTION) ACT, 1919.

## INSPECTOR'S REPORT.

Name of Vessel	(Date of Inspection)		
Where from	Reg. Tonnage		
Cargo			
Are there rats on board ?	None	Few	Many
What Ratcatcher is employed in Manchester			
Last Clearance of rats —When ?			
	Where ?		
	How ?		
	Number ?		
How are rats dealt with at sea ?			
Number destroyed at sea during voyage ?			
Dead rats—number found during voyage ?			
Are particulars of rat destruction entered in ship's log ?			
Are rat-guards (a) supplied ?		(b) used ?	
Frequency of inspection and moving of ship's stores and gear			
Is refuse regularly cleared when in port ?			
Are gangways lighted at night ?			
Are dead rats burned ?			
Evidence of rat infestation found by Inspector :—			
(a) in storerooms			
(b) other parts of ship			
Owners or Agents			

*Signed*

Inspector.

The various rat-catchers employed on ships within the Port were interviewed, and it was explained that they would be regarded as authorised by the Authority to carry out their work provided that they would undertake to have all caught rats destroyed inside the dock premises and obtain a certificate of the catch and disposal from the Officer in charge of every ship where operations had been carried out. This procedure being agreed to, a book of certificate forms was issued to each rat-catcher, his name and address being entered on the

cover with an intimation that the book had been so issued. The certificate is to the following effect :—

MANCHESTER PORT SANITARY AUTHORITY.

RATS AND MICE (DESTRUCTION) ACT, 1919.

THIS IS TO CERTIFY <i>that</i>	<i>Rats were, on</i>	192
<i>caught by Mr.</i>	<i>on the s.s.</i>	
<i>lying at</i>	<i>and that the same have been drowned</i>	
<i>and burned under my supervision.</i>		
<i>Date</i>	<i>s.s.</i>	<i>Officer in Charge,</i>

On the reverse of the form is a classification of the rats caught into Grey, Brown and Black, and the counterfoil gives the date, name of ship, number of rats caught, and name of officer certifying.

The policy up to the end of the year has been to spread information in the proper direction with the ultimate aim of rendering both owners and masters thoroughly well acquainted with their obligations under the Act. It is yet too early to say to what extent this plan is proving successful or whether additional measures will be required. The Authority has not appointed a special whole-time rat officer to attend to the duties prescribed by the Act.

As no vessel was reported as infested, no complete fumigation was carried out during the year.

As the powers of the Authority under the Act are confined to ships on the waters of the Port, and therefore are of non-effect so far as concerns the quays and transit sheds, your Medical Officer sought the co-operation of the Ship Canal Company to complete the repressive measures. The Company undertook in addition to the whole time rat-catcher already in their employ, to provide further rat-catchers should the existing arrangements appear at any time to be insufficient ; to obtain and pass on a regular return of rats caught on the dock premises ; to insist upon the destruction of trapped rats ; to forward information respecting any unusual mortality among rats, and to hand over dead rats if required.



The following tables give particulars respecting rat destruction during the year.

TABLE A.

Names of Vessels arriving in the Port Sanitary District			Whether subjected to Rat Destruction	Measures Employed	Effect of these Measures	
Plague Infected	Plague Suspected	From Infected Ports			On Rats. No. killed	On Cargo
N	N	s.s. "Tartar Prince" ...	Yes	Rat-catcher	78	None
		s.s. "Teespool" .....	No	..	..	..
		s.s. "Black Prince"...	Yes	Rat-catcher	47	None
		s.s. "Kaffir Prince" ...	Yes	Do.	72	do.
		s.s. "Bembridge" .....	No	..	..	..
		s.s. "Merchant Prince" ..	Yes	Rat-catcher	62	None
		s.s. "Syrian Prince" ..	Yes	Do.	11	do.
		s.s. "Brescia" .....	No	..	..	..
		s.s. "Cyprian Prince" ..	Yes	Rat-catcher	37	None
		s.s. "Algerian Prince" ..	Yes	Do.	33	do.
		s.s. "Norman Prince":	Yes	Do.	67	do.
		s.s. "Cypria" .....	No	..	..	..
		s.s. "Scottish Prince" .	Yes	Rat-catcher	110	None
		s.s. "Tudor Prince" ..	Yes	Do.	19	do.
		s.s. "Syrian Prince" ..	Yes	Do.	30	do.
		s.s. "Brescia" .....	No	..	..	..
		s.s. "Merchant Prince"	Yes	Rat-catcher	71	None
		s.s. "Algerian Prince" .	Yes	Do.	65	do.
		s.s. "Scottish Prince" .	Yes	Do.	56	do.
		s.s. "Syrian Prince" ..	Yes	Do.	18	do.
		s.s. "Algerian Prince"	Yes	Do.	72	do.
		s.s. "Defender" .....	No	..	..	..
		s.s. "Manaar" .....	Yes	Rat-catcher	None	None
		s.s. "Scottish Prince" .	Yes	Do.	84	do.
		s.s. "Syrian Prince" ..	Yes	Do.	31	do.
		s.s. "Pensilva" .....	No	..	..	..
		s.s. "Soldier Prince" ..	Yes	Rat-catcher	130	None



TABLE A (*continued*).

Names of Vessels arriving in the Port Sanitary District			Whether subjected to Rat Destruction	Measures Employed	Effect of these Measures	
Plague Infected	Plague Suspected	From Infected Ports			On Rats. No. killed	On Cargo
— N —	— N —	s.s. "Cyprian Prince"	Yes	Rat-catcher	21	None
		s.s. "Candidate" . . . . .	No	..	..	..
		s.s. "Anchoria" . . . . .	Yes	Rat-catcher	27	None
		s.s. "Siamese Prince"	Yes	Do.	10	do.
		s.s. "Black Prince" . . .	Yes	Do.	41	do.
		s.s. "Scottish Prince"	Yes	Do.	12	do.
		s.s. "Glenshiel" . . . . .	No	..	..	..
					1204	

Other vessels subjected to rat destruction during the year numbered 125, the number of rats caught being 7,722. In addition 6,352 rats were trapped on the dock sheds and warehouses. The total number of rats accounted for is therefore 15,278. Of the 8,926 caught on shipboard 511 were black, 592 brown and 7,823 grey.

TABLE B.

SHEWING THE NUMBER OF RATS CAUGHT ON SHIPBOARD EACH MONTH

	Grey.	Brown.	Black.	Total.
January . . . . .	578	70	11	659
February . . . . .	850	60	14	924
March . . . . .	665	36	16	717
April . . . . .	862	26	9	897
May . . . . .	699	32	8	739
June . . . . .	601	39	15	655
July . . . . .	590	54	3	647
August . . . . .	411	60	51	522
September . . . . .	904	88	50	1042
October . . . . .	435	23	73	531
November . . . . .	538	38	178	754
December . . . . .	690	66	83	839
	<u>7823</u>	<u>592</u>	<u>511</u>	<u>8926</u>

FOOD INSPECTION.

IMPORTATION OF LIVE STOCK.

The following table shews the total number of live stock imported during the year :—

	Cattle	Sheep and Lambs.	Pigs.	Goats.
Coastwise (Irish).....	26,277	28,022	472	15
Foreign .....	—	—	—	—

FOREIGN MEAT REGULATIONS.

Two re-exportations were made during the year under these regulations, owing to the absence of any certificate from the country of origin. In each case the parcel consisted of five casks of pigs' maws.

RESULTS OF INSPECTION.

The following tables show the amounts of Food Imports which have been condemned during the year ; Table A giving particulars of seizures at the Foreign Animals Wharf, and Table B giving particulars of seizures on the various Dock Quays. It will also be noticed from Table C that a quantity of tinned goods, etc., have been voluntarily surrendered for destruction.

(A)				Weight.			
				T.	c.	q.	lbs.
Beef (14 carcasses and parts)	..	..	..	4	7	1	9
Mutton	..	..	..	0	0	0	2
Lamb (8 carcasses)	..	..	..	0	2	2	15
Pork (2 carcasses)	..	..	..	0	4	1	4
Beef Offals (14 full sets, etc.)	..	..	..	0	17	2	21
Sheeps' Offals (4 sets)	..	..	..	0	0	2	13
Lamb Offals (8 sets)	..	..	..	0	0	2	24
Pork Offals (2 sets)	..	..	..	0	0	1	20
TOTAL				5	13	2	24

(B)

Articles.	Weight.			
	T.	c.	q.	lbs.
Grain, Cereals, &c.—				
Wheat .. .. .	1029	10	1	24
Rice .. .. .	51	12	2	24
Oats .. .. .	0	17	0	18
Maize .. .. .	20	7	2	26
Barley .. .. .	0	2	3	15
Corn Meal Grits .. .. .	1	6	1	20
Flour .. .. .	36	17	0	27
Maize Meal .. .. .	54	0	1	12
Manioc Root .. .. .	1	0	0	0
Corn Flour .. .. .	0	14	0	0
Lentils .. .. .	2	2	0	0
Rye .. .. .	2	0	0	20
Fruit and Vegetables—				
Oranges (2,367 cases & 2,006 half-cases)	203	7	2	0
Apples (116 bxs. and 611½ barrels) ..	32	14	3	26
Dates .. .. .	4	0	0	0
Mandarins (161 cases) .. .. .	4	6	1	0
Pears (162 cases, 168 half-cases, and 132½ boxes) .. .. .	10	14	2	14
Tomatoes (4 cases) .. .. .	0	4	0	0
Peanuts (23 bags) .. .. .	1	3	0	0
Onions (175 cases) .. .. .	8	15	0	0
Hazel Nuts (88 bags) .. .. .	8	16	0	0
Potatoes (4 bags) .. .. .	0	4	0	0
Tinned Foods—				
Corned Beef (15,296 tins) .. .. .	17	11	3	27
Raspberry Pulp (445 tins) .. .. .	1	19	2	26
Boiled Beef (3 tins) .. .. .	0	0	0	6
Apricot Pulp (335 tins) .. .. .	1	9	3	18
Lunch Tongues (48 tins) .. .. .	0	2	1	25½
Peaches (223 tins) .. .. .	5	11	0	1
Boiled Mutton (1 tin) .. .. .	0	0	0	6
Cherries (1 tin) .. .. .	0	0	0	10

(B) *continued.*

Articles.						Weight.			
						T.	c.	q.	lbs.
Condensed Milk (727 tins)	..	..				0	6	1	27
Corned Mutton (2,496 tins)	..	..				6	13	2	24
Pigs' Tongues (11 tins)	..	..				0	0	2	10
Miscellaneous—									
Sugar	..	..	..	..	..	14	4	1	19
Ham	..	..	..	..	..	0	0	0	12
Frozen Beef	..	..	..	..	..	5	12	1	14
Frozen Mutton	..	..	..	..	..	18	4	0	19
Frozen Lamb	..	..	..	..	..	2	3	1	18
Lard	..	..	..	..	..	3	2	2	24
Frozen Rabbits	..	..	..	..	..	108	14	1	19
Gooseberry Pulp (1 cask)	..	..				0	2	0	0
Sheeps' Hearts	..	..	..	..	..	0	6	1	17
Sheeps' Kidneys	..	..	..	..	..	0	1	0	0 $\frac{1}{2}$
Ox Brains	..	..	..	..	..	0	0	1	8
Orange and Lemon Skins	..	..				10	18	3	0
Cauliflowers in Brine	..	..	..	..	..	0	6	0	0
Raisins (1 box)	..	..	..	..	..	0	0	2	0
Cocoa Beans	..	..	..	..	..	17	5	1	18
TOTAL						1689	14	2	15
TOTAL TABLE A						5	13	2	24
GROSS TOTAL						1695	8	1	11

## (C)

## Voluntarily Surrendered.

Articles.				Weight.			
				T.	c.	q.	lbs.
Condensed Milk (4,968 tins)	..	..		1	13	1	2
Sheeps' Kidneys	..	..	..	0	0	3	21
TOTAL				1	14	0	23



## FRESH MEAT.

Emergency slaughters, owing to accident, or ordered by the Inspector of the Ministry of Agriculture, involved 12 beasts, 4 sheep, and 3 pigs. The condemnations from these, the carcasses of 38 beasts, 20 sheep and 5 pigs which were killed on board ship on account of accident, and 108 cattle and 482 sheep and lambs killed at the Foreign Animals Wharf owing to an unconfirmed outbreak of Foot and Mouth Disease, are shewn in Table A.

TABLE SHEWING THE NUMBER OF EXAMINATIONS OF ANIMALS SLAUGHTERED AT THE FOREIGN ANIMALS WHARF AND ON BOARD SHIP DURING THE YEAR, AND THE NUMBERS FROM WHICH CONDEMNATIONS WERE MADE.

Number of Inspections	Condemnations for					
	Tuberculosis		Decomposition		Other Causes	
	Entire Carcases and Offals	Parts and Organs only (No. of Animals)	Entire Carcases and Offals	Parts and Organs only (No. of Animals)	Entire Carcases and Offals	Parts and Organs only (No. of Animals)
158 Cattle ..	1	3	12	21	1	10
506 Sheep and Lambs	..	..	8	4	..	2
8 Pigs .....	...	..	2	..	..	..

## WHEAT.

The large amount of unsound wheat dealt with was owing mainly to the unusual amount of water damage, during rough weather, in the case of three particular vessels.

## RICE.

A considerable quantity of this was rendered unsound through water damage resulting from a collision.

## ORANGES.

The large proportion of unsound oranges was due to a bad season producing a poor quality of fruit, and to the stimulation of decomposition by collecting and packing when wet.

## CANNED GOODS.

C. C. BEEF.—The condemnations took place for the most part in connection with three consignments of apparently old stock from Australia, and a consignment from France which had every appearance of having been dumped there for some time.

PEACH PULP.—All these condemnations, with the exception of a single one pound tin, consisted of 56 lbs. tins which had been imported from Australia in cases each containing two tins. The tins were obviously second-hand, and had apparently been previously used for petrol or kerosene.

## COCOA BEANS.

A large quantity of these had been loaded up in a wet condition, with the result that decomposition had set in during the voyage.

## FROZEN RABBITS.

The condemnations were from consignments of twenty-three thousand cases ex s.s. "Manchester City" and s.s. "Nestor," which had been placed in cold store at Weaste. They were affected with black and white mould, rancidity and general deterioration. Several changes of location and long extent of cold storage were responsible for the condition.

## FROZEN MUTTON.

A considerable quantity of this in store at Weaste and at No. 9 Dock Cold Store was found to be affected with black and white mould. A large amount of trimming was carried out, and the condemnations noted consisted of the mouldy parts removed and surrendered.

Samples forwarded for examination to the Manchester Public Health Laboratory during the year were :—

Article.	Object of Examination.	Result.
Rum .....	Evidence of contamination by acetic acid.	Not confirmed.
Fruit Pulp .....	Nature of preservative.	Preservative—Benzoic acid.
Preserved French Cherries.	Do.	Preservative—Sulphurous acid.
Lard .....	Evidence of bacterial contamination	Confirmed.



TABLE I.—SHEWING PRINCIPAL FOOD IMPORTS AT  
CHIEF HOME PORTS.

PORT.	IMPORT.	AMOUNT. 1915	AMOUNT. 1916	AMOUNT. 1917	AMOUNT. 1918	AMOUNT 1919
		£	£	£	£	£
London ..	Meat	37,009,479	37,185,048	36,044,889	57,673,268	60,820,213
	Grain	30,579,442	35,228,955	47,446,306	44,367,698	39,578,836
	Tea	19,245,425	17,664,248	11,404,173	21,757,492	29,756,936
	Sugar	13,039,023	16,843,009	17,706,449	16,297,293	26,144,301
	Butter	10,460,687	5,962,623	9,030,379	9,840,287	8,362,844
	Fruit	7,195,243	8,870,843	3,655,387	4,569,765	20,478,155
	Cheese	6,901,940	8,119,554	10,165,172	6,463,404	9,436,228
	Eggs	1,965,551	1,151,257	985,499	348,609	1,857,560
Liverpool .	Meat	31,293,277	37,628,265	40,748,085	73,179,998	76,584,519
	Grain	21,936,436	31,125,254	45,444,439	46,132,949	30,899,888
	Sugar	8,977,871	9,996,768	12,331,732	12,202,137	20,927,711
	Fruit	5,195,727	4,750,975	3,500,668	4,470,268	16,586,478
	Lard	1,554,380	4,959,137	4,695,634	11,009,614	8,284,028
	Cheese	1,635,688	2,116,819	4,803,175	5,174,204	2,117,132
Hull ..	Grain	12,016,892	11,790,589	11,444,042	7,999,617	12,201,942
	Butter	2,764,361	2,440,364	2,690,018	1,381,551	1,329,372
	Meat	4,522,812	4,676,283	5,538,322	4,928,177	4,844,596
	Eggs	1,080,178	847,965	1,394,854	2,152,657	1,612,185
	Margarine	1,968,576	2,739,356	1,626,822	345,677	822,756
	Sugar	746,180	965,185	72,470	69,442	464,840
	Lard	749,025	713,686	1,333,706	610,321	976,023
	Fruit	536,438	351,424	176,749	317,569	1,641,271
	Fish	611,741	442,872	1,097,150	821,338	970,920
	Vegetables	513,175	462,587	522,652	404,644	789,573

TABLE I. (*continued*)—SHEWING PRINCIPAL FOOD IMPORTS AT  
CHIEF HOME PORTS.

PORT.	IMPORT.	AMOUNT. 1915	AMOUNT. 1916	AMOUNT. 1917	AMOUNT. 1918	AMOUNT. 1919
		£	£	£	£	£
Manchester	Grain	6,781,348	8,417,687	10,271,329	8,179,595	9,915,957
	Sugar	1,497,456	1,692,194	1,075,532	683,792	2,283,381
	Meat	556,525	1,059,319	2,230,259	7,322,285	8,485,299
	Butter	517	21,977	3,957	11,812	1,361,907
	Lard	833,730	1,155,280	798,217	746,864	1,590,069
	Fruit	507,209	583,910	356,047	508,238	1,572,461
	Eggs	186,228	136,459	2,454	135,309	428,626
	Cheese	221,046	316,058	594,674	587,365	1,073,663
Southamp- ton	Meat	1,196,063	2,222,176	2,698,034	4,211,675	2,564,935
	Butter	2,421,815	997,916	911,128	1,324,487	53,915
	Cocoa and Coffee	66,265	234,170	76,610	579	214,577
	Vegetables	632,696	731,224	1,269,241	1,485,123	1,406,625
	Fruit	270,344	298,584	594,476	1,261,801	1,157,441
	Grain	201,174	261,904	855,139	567,069	1,211,031
Leith	Butter	2,309,733	1,980,737	345,643	—	125,868
	Grain	3,817,282	4,008,473	2,979,932	705,720	4,994,813
	Eggs	760,251	602,768	18,597	—	286,941
	Sugar	798,521	655,023	303,421	124,424	1,476,947
Glasgow	Grain	6,250,699	90,950	13,824,507	12,288,236	14,242,079
	Meat	2,101,816	2,818,777	4,216,200	10,491,385	10,302,370
	Fruit	848,840	981,770	596,246	1,264,011	2,137,723
Harwich	Meat	390,866	20,760	239,572	—	4,874
	Eggs	138,311	13,370	96,784	—	141,238
	Butter	27,958	582	122,890	101,717	715,738
	Margarine	1,256,836	374,065	1,604,513	156,339	316,002
	Cocoa	264,883	60,915	—	5,602	84,505

TABLE I. (*continued*)—SHEWING PRINCIPAL FOOD IMPORTS AT  
CHIEF HOME PORTS.

PORT.	IMPORT.	AMOUNT. 1915	AMOUNT. 1916	AMOUNT. 1917	AMOUNT. 1918	AMOUNT. 1919
		£	£	£	£	£
Bristol ..	Grain	8,641,719	8,737,673	11,843,865	9,927,700	12,327,479
	Sugar	1,565,795	1,918,179	951,194	623,859	2,747,651
	Fruit	1,135,237	1,158,483	637,212	221,330	1,978,651
	Cheese	1,087,036	1,227,884	1,281,748	1,048,872	685,078
	Meat	1,561,561	1,643,961	3,524,944	9,069,648	6,172,030
	Lard	486,337	303,050	352,344	1,070,927	856,364
Newcastle- on-Tyne	Butter	3,275,829	2,023,752	2,072,010	460,165	1,595,775
	Grain	1,506,689	2,013,701	1,710,190	1,302,615	2,495,047
	Meat	508,963	297,770	1,704,360	104,085	80,508
	Eggs	415,330	247,516	832,206	801,689	936,637
	Sugar	79,022	14,066	31	85	41,828
Grimsby	Butter	4,561,830	4,128,359	2,120,435	644	487,759
	Meat	5,660,551	5,254,004	2,436,734	21,261	3,659
	Eggs	582,669	415,501	351,453	59,349	224,430
	Margarine	75,942	5,385	—	—	3,335
	Grain	134,297	100,674	111,576	497,112	990,380
	Milk	25,627	1,851	26,963	28,543	4,824
Cardiff	Grain	2,956,541	3,765,962	3,896,268	1,857,043	3,089,175
	Vegetables	111,915	131,123	192,807	167,438	380,674
	Meat	375,142	5,106	370,835	3,121,175	1,518,367



TABLE II.—SHEWING THE PRINCIPAL PRODUCING COUNTRIES AND THE DIFFERENCES IN THE AMOUNTS OF FOOD IMPORTS PRODUCED FOR THIS COUNTRY IN THE SIX YEARS 1914, 1915 1916 1917, 1918, and 1919.

COUNTRY.		YEAR 1914.	YEAR 1915.	YEAR 1916.	YEAR 1917.	YEAR 1918.	YEAR 1919.
		£	£	£	£	£	£
South and Central America ..	..	30,990,874	73,288,942	67,968,042	70,111,163	84,707,988	100,606,132
United States of America ..	..	37,104,748	91,584,431	128,951,191	154,812,611	231,876,095	218,638,845
Australia and New Zealand ..	..	28,264,451	29,295,016	28,263,499	40,843,044	32,370,201	61,242,858
Denmark .. ..	..	24,712,546	21,803,097	21,211,302	17,350,873	3,880,758	7,793,368
Canada .. ..	..	25,136,082	29,927,365	45,963,887	57,434,313	60,525,058	73,060,534
India .. ..	..	16,234,738	26,603,357	24,823,715	23,159,569	38,294,803	26,552,482
Netherlands .. ..	..	16,958,419	14,452,843	14,474,457	15,106,614	4,859,438	10,371,271
Germany.. ..	..	8,249,664	1,600	7,448	301	161	103,461
Russia .. ..	..	12,858,755	8,706,082	691,288	128,951	5,042	169,630
France .. ..	..	7,195,398	7,555,593	5,424,090	4,359,770	7,314,393	12,977,856
Spain .. ..	..	5,410,191	6,290,858	7,708,146	5,463,008	12,409,739	19,090,907
Sweden .. ..	..	2,242,576	1,141,818	16,845	—	—	23,817
Belgium .. ..	..	817,404	99,527	54,908	17,652	—	1,936,462
Roumania .. ..	..	2,666,410	—	—	—	—	—

TABLE III.—COMPARING FOOD IMPORTS WITH TOTAL IMPORTS, AT THE CHIEF PORTS, AND SHEWING THE RATE OF INCREASE AND DECREASE.

	1910	1911	1912	1913	1914	1915	1916	1917	1918	1919
LONDON:—										
Total Imports .	£ 228,260,138	£ 229,988,484	£ 239,344,384	£ 253,879,289	£ 253,172,916	£ 337,565,905	£ 359,382,178	£ 337,703,405	£ 384,986,093	£ 561,114,025
Food Imports..	87,112,349	91,982,211	92,127,557	91,190,956	106,388,309	142,058,627	159,080,970	155,615,189	192,809,469	260,697,953
LIVERPOOL:—										
Total Imports .	170,270,246	159,914,782	179,250,136	175,491,584	166,443,588	230,027,506	280,023,728	372,639,066	484,458,865	550,254,434
Food Imports .	47,808,612	47,728,697	52,017,164	53,339,221	57,980,678	83,148,700	101,381,687	129,213,261	184,127,429	213,553,612
HULL:—										
Total Imports .	42,282,026	41,082,231	48,607,902	49,840,283	41,027,070	50,157,191	54,155,257	57,121,843	75,702,128	85,153,417
Food Imports .	20,946,627	20,968,058	24,584,491	24,286,311	21,380,777	26,178,958	26,041,698	28,344,413	20,730,853	31,300,870
MANCHESTER:—										
Total Imports .	29,944,905	32,502,954	35,111,128	35,290,606	33,741,734	39,656,092	47,967,835	57,731,668	78,193,280	98,308,318
Food Imports .	7,730,289	7,626,060	7,425,765	7,502,964	11,065,871	10,993,977	13,738,286	15,591,837	22,243,367	29,954,556
SOUTHAMPTON:—										
Total Imports .	21,286,105	20,764,972	24,543,991	25,492,809	18,723,500	14,360,522	12,087,465	18,538,064	29,485,261	31,256,612
Food Imports .	8,252,323	7,446,748	8,552,420	9,105,704	7,101,198	5,554,634	5,269,714	7,056,881	9,262,030	8,049,433
BRISTOL:—										
Total Imports .	14,991,615	15,557,506	17,511,486	18,019,452	17,516,336	23,454,315	24,590,007	31,987,8567	46,022,197	49,359,624
Food Imports .	9,288,803	9,715,609	11,413,773	11,647,888	12,946,310	14,841,624	16,002,736	19,434,53	30,403,412	28,749,207



	1910	1911	1912	1913	1914	1915	1916	1917	1918	1919
<b>HARWICH :—</b>										
Total Imports .	21,152,857	22,437,602	25,548,997	25,637,268	17,066,312	3,769,541	986,502	2,720,799	967,095	5,239,826
Food Imports .	9,091,399	10,047,467	11,881,961	11,251,471	9,107,931	2,599,751	556,275	2,461,538	412,369	2,039,455
<b>GLASGOW :—</b>										
Total Imports .	14,533,330	15,631,149	16,941,685	18,485	16,870,214	26,568,225	33,804,247	40,342,990	70,419,839	64,189,710
Food Imports .	7,024,801	7,345,961	7,840,368	8,455,695	9,517,902	12,084,518	17,006,163	22,051,691	29,595,245	35,471,977
<b>FOLKESTONE :—</b>										
Total Imports .	10,068,224	13,022,682	14,582,065	15,469,330	14,582,065	9,793,715	8,314,327	6,971,770	10,741,414	11,105,835
Food Imports .	760,218	962,088	1,232,524	1,156,056	1,718,204	692,771	659,740	421,150	209,273	1,596,110
<b>LEITH :—</b>										
Total Imports .	13,559,655	15,054,221	16,531,420	15,748,662	13,751,770	15,078,990	16,675,229	13,168,468	9,789,345	17,306,445
Food Imports .	8,535,627	9,287,551	10,257,704	10,944,251	9,132,994	9,279,769	9,500,547	5,730,369	2,799,602	9,887,316
<b>GRIMSBY :—</b>										
Total Imports .	12,615,959	13,544,125	14,786,430	15,849,100	13,259,376	15,493,169	16,907,932	12,161,675	8,306,355	14,252,234
Food Imports .	4,587,264	5,153,730	5,130,616	5,325,294	6,491,581	11,799,435	11,259,672	6,212,030	864,901	3,672,584
<b>NEWCASTLE :—</b>										
Total Imports .	9,442,944	9,784,592	10,043,427	11,349,000	9,387,476	11,859,937	11,706,702	12,652,449	11,819,486	12,372,453
Food Imports .	5,424,098	5,746,806	6,050,212	7,013,067	5,744,058	6,929,227	5,592,756	6,792,903	3,559,685	6,229,145
<b>CARDIFF :—</b>										
Total Imports .	6,375,106	6,016,772	6,153,205	6,704,664	6,056,307	8,387,354	9,039,528	11,055,496	14,895,388	13,463,204
Food Imports .	3,326,144	3,218,689	2,827,732	2,878,353	3,099,151	3,652,692	4,029,407	4,746,313	6,130,014	5,617,320



## THE SANITARY CONDITION OF SHIPS.

The number of vessels registered under the Merchant Shipping Act inspected during the year, totals 2,015. Of these 651 were found with insanitary conditions of various kinds. When compared with the numbers for 1919, an increase under both headings is noted. In 1919 the Inspections numbered 1,875, and the defective vessels 621. The percentage of defective vessels is therefore 0·82 lower for 1920. In the Manchester Section there is an increase of 92 inspections from the previous year, and in the Runcorn Section an increase of 48. The following Table shews the total number of vessels inspected in the Port, together with the total numbers and percentage of defective vessels each year, from 1898 to 1920 inclusive.

Mr. Whalley has assisted in the duties of inspection in each section of the Port as occasion arose.

The Total number of vessels inspected within the Port, together with the total number of percentages of defective vessels, from 1898 to 1920 :—

Year.		No. Inspected.		No. Defective.		Percentage.
1898	....	1346	....	263	....	19·5
1899	....	1294	....	251	....	19·4*
1900	....	1610	....	231	....	14·4*
1901	....	1344	....	263	....	19·5
1902	....	2477	....	870	....	35·1
1903	....	2585	....	916	....	38·4
1904	....	2621	....	1241	....	47·35
1905	....	2510	....	1169	....	46·57
1906	....	2284	....	984	....	43·08
1907	....	2592	....	1014	....	39·12
1908	....	2562	....	954	....	37·22
1909	....	2871	....	1062	....	36·99
1910	....	2879	....	1003	....	34·86
1911	....	2853	....	1033	....	36·20
1912	....	2778	....	871	....	31·35
1913	....	2786	....	904	....	32·44
1914	....	2775	....	810	....	29·19
1915	....	2623	....	749	....	28·61

Year.		No. Inspected.		No. Defective.		Percentage
1916	....	2264	....	729	....	32.20
1917	....	1919	....	633	....	32.98
1918	....	1672	....	555	....	33.19
1919	....	1875	....	621	....	33.12
1920	....	2015	....	651	....	32.30

The number of vessels inspected at various points within the Port during each year are shewn as follows :—

Comparison as to the number of vessels inspected at various points within the Port :—

Year	Manchester and Salford.	Runcorn and Weston Point.	Ellesmere Port.	Widnes.	Other Places.
1898	.. 762	.. 386	.. 111	.. 60	.. 27
1899	.. 667	.. 308	.. 108	.. 43	.. 168*
1900	.. 619	.. 331	.. 80	.. 63	.. 517*
1901	.. 861	.. 313	.. 70	.. 66	.. 34
1902	.. 1194	.. 862	.. 137	.. 174	.. 110
1903	.. 1087	.. 737	.. 192	.. 206	.. 163
1904	.. 1186	.. 965	.. 175	.. 155	.. 137
1905	.. 1157	.. 863	.. 164	.. 135	.. 191
1906	.. 1105	.. 731	.. 173	.. 99	.. 176
1907	.. 1223	.. 883	.. 191	.. 125	.. 167
1908	.. 1286	.. 852	.. 171	.. 82	.. 171
1909	.. 1338	.. 890	.. 273	.. 174	.. 196
1910	.. 1359	.. 969	.. 285	.. 156	.. 110
1911	.. 1390	.. 909	.. 264	.. 97	.. 193
1912	.. 1369	.. 955	.. 235	.. 94	.. 125
1913	.. 1414	.. 912	.. 223	.. 111	.. 126
1914	.. 1304	.. 821	.. 283	.. 156	.. 211
1915	.. 1345	.. 663	.. 258	.. 106	.. 251
1916	.. 1163	.. 579	.. 206	.. 141	.. 177
1917	.. 947	.. 498	.. 188	.. 136	.. 150
1918	.. 795	.. 474	.. 127	.. 145	.. 131
1919	.. 843	.. 543	.. 189	.. 97	.. 203
1920	.. 886	.. 627	.. 210	.. 79	.. 213

\* Extra Inspector at Eastham.

The following Table shews the progress made during the year in obtaining the remedy of defects.

VESSELS RENDERED SANITARY.

	1913	1914	1915	1916	1917	1918	1919	1920
January .....	53	29	11	35	10	16	17	9
February .....	37	24	20	39	28	20	18	34
March .....	40	32	31	50	28	33	26	24
April .....	44	46	19	46	29	32	8	11
May .....	55	43	17	71	26	18	22	20
June .....	46	35	32	61	34	25	32	22
July .....	56	29	33	43	33	25	19	20
August .....	35	34	45	56	13	38	18	24
September .....	38	33	30	54	32	30	20	20
October .....	47	29	31	50	35	26	23	9
November .....	50	19	41	33	33	23	20	29
December .....	38	29	34	86	39	39	28	26
	---	---	---	---	---	---	---	---
Totals .....	588	530	387	396	340	325	251	248
	---	---	---	---	---	---	---	---

Eight Public Health Notices have been served, as against 10 in 1919. It has been ascertained that two of these have been fully complied with and two partly. There has been no opportunity of inspecting the other vessels.



# TOTALS OF MONTHLY INSPECTIONS FOR 1910-17-18-19-20.

1910.                      1917.                      1918.                      1919.                      1920.  
 (Record Year)

	M/c.	RUN- CORN.	TOTAL.	M/c.	RUN- CORN.	TOTAL.	M/c.	RUN- CORN.	TOTAL.	M/c.	RUN- CORN.	TOTAL.	M/c.	RUN- CORN.	TOTAL.
January ..	90	86	176	62	43	105	48	44	92	38	44	82	41	44	85
February ..	97	110	207	88	75	163	59	69	128	56	56	112	77	90	167
March ..	111	111	222	78	90	168	55	70	125	93	93	186	105	108	213
April ..	98	107	205	87	85	172	80	96	176	68	76	144	69	62	131
May ..	133	149	282	75	71	146	63	43	106	72	78	150	72	87	159
June ..	121	112	233	90	92	182	68	77	145	93	78	171	93	106	204
July ..	114	128	242	104	91	195	84	96	180	71	83	154	78	97	175
August ..	135	129	264	76	41	117	69	71	140	75	62	137	106	98	204
September ..	107	120	227	83	86	169	86	76	162	95	103	198	79	67	146
October ..	139	157	296	78	96	174	55	47	102	74	82	156	81	60	141
November ..	104	100	204	74	62	136	62	69	131	76	82	158	98	92	190
December ..	176	145	321	100	92	192	110	75	185	110	117	227	109	91	200
TOTALS ..	1425	1454	2879	995	924	1919	839	833	1672	921	954	1875	1013	1002	2015
INCREASE (+) OR DECREASE (—) from previous year { }															
				—238	—107	—345	—156	—91	—247	+82	+121	+203	+92	+48	+140

1920.—TABLE A.

Shewing the number of vessels inspected and found insanitary arriving from Foreign and Coastwise Ports :—

		Inspected.	Insanitary	No. of Orders issued under P. H. Act.
Foreign—				
Steamships	..	796	239	0
Sailing Vessels	..	33	13	0
		<hr/>	<hr/>	<hr/>
Totals	..	829	252	0
		<hr/>	<hr/>	<hr/>
Coastwise—				
Steamships	..	620	165	1
Sailing Vessels	..	566	234	7
		<hr/>	<hr/>	<hr/>
Totals	..	1186	399	8
		<hr/>	<hr/>	<hr/>
Gross Totals	..	2015	651	8

TABLE B.

Shewing the numbers of British and Foreign vessels inspected and numbers found insanitary :—

			Inspected.	Insanitary.
British Steamships	..	..	1129	349
„ Sailing Vessels	..	..	214	62
„ Flats and Barges	..	..	366	184
Foreign Steamships	..	..	287	53
„ Sailing Vessels	..	..	19	3
			<hr/>	<hr/>
Totals	..	..	2015	651
			<hr/>	<hr/>
Revisits	..	..	239	
Gross Total of Visits and Revisits			2254	

TABLE C.

Shewing the number of vessels inspected and number found insanitary at different points in the Port :—

	Inspected	Insanitary
Acton Grange .. .. .	3	0
Astmoor Marsh (Wigg's Works) .	74	35
Barton .. .. .	6	1
Davyhulme .. .. .	27	10
Eccles (including Irwell Park Wharf)	75	27
Ellesmere Port .. .. .	210	100
Frodsham .. .. .	1	1
Irlam .. .. .	4	0
Ince .. .. .	1	0
Manchester, Salford and Stretford.	886	231
Partington .. .. .	14	4
Runcorn .. .. .	390	117
Warrington .. .. .	7	0
Weston Point and Weston Mersey		
Lock .. .. .	238	98
Widnes .. .. .	79	27
	<hr/>	<hr/>
Totals .. .. .	2015	651
	<hr/>	<hr/>



TABLE D.

Shewing the Nationalities of the vessels inspected and number found insanitary :—

					Inspected	Insanitary
British	..	..	..	..	1709	595
American (U. S.)	..	..	..	..	85	18
Norwegian	..	..	..	..	83	15
Swedish	..	..	..	..	57	8
Spanish	..	..	..	..	27	5
Danish	..	..	..	..	13	3
French	..	..	..	..	12	0
Greek	..	..	..	..	8	1
Canadian	..	..	..	..	4	3
Dutch	..	..	..	..	4	2
Italian	..	..	..	..	3	0
Australian	..	..	..	..	2	0
Finnish	..	..	..	..	2	0
Belgian	..	..	..	..	1	0
Brazilian	..	..	..	..	1	0
German	..	..	..	..	1	0
Icelandic	..	..	..	..	1	0
Lettish	..	..	..	..	1	0
Roumanian	..	..	..	..	1	1
					<hr/>	<hr/>
	Totals	..	..	..	2015	651
					<hr/>	<hr/>

TABLE E.

Shewing the number of crews of various Nationalities on vessels inspected during the year :—

British—

Europeans	..	..	..	..	26,203
Lascars	..	..	..	..	1,651
Chinese	..	..	..	..	28
					<hr/>
					27,882
American (U. S.)	..	..	..	..	3,445
Norwegian	..	..	..	..	1,745
Swedish	..	..	..	..	1,168
Spanish	..	..	..	..	735
French	..	..	..	..	223
Danish	..	..	..	..	178
Greek	..	..	..	..	130
Italian	..	..	..	..	92
Dutch	..	..	..	..	82
Finnish	..	..	..	..	46
Belgian	..	..	..	..	34
Roumanian	..	..	..	..	34
Brazilian	..	..	..	..	25
German	..	..	..	..	17
Icelanders	..	..	..	..	10
Letts	..	..	..	..	7
Japanese	..	..	..	..	6
					<hr/>
Total	..	..	..	..	<u>35,859</u>

TABLE F.

Giving particulars of insanitary conditions found in the different vessels inspected :—

CREW'S QUARTERS.	Steam Ships.	Sailing Vessels.	Flats & Barges.
Accumulations of dirt and refuse in quarters ...	8	—	—
Accumulation of stagnant water ..	12	—	—
Bilges requiring or inaccessible for cleansing ..	1	—	3
Bulkheads defective, allowing communication between W.C.'s, holds, &c., and quarters .....	15	1	18

	Steam Ships.	Sailing Vessels.	Flats & Barges.
Chain lockers open to forecastles, casing defective, &c. ....	15	2	—
Condensed moisture forming on iron decks and beams ....	1	—	1
Decklights, portlights, &c., broken & defective.	66	11	34
Drainage of quarters defective, allowing com- munication with w.c.'s, &c. ....	18	—	—
Forecastles, &c., requiring cleansing, painting, limewashing, &c. ....	117	8	61
Forecastles, &c., infested with vermin ....	3	1	1
Forecastles, &c., deficient in lighting ....	16	5	17
Forecastles, &c., deficient in lighting owing to lights being covered by deck cargo, &c., ....	13	—	—
Flooring, fittings, &c., defective ....	6	—	43
Forecastles overheated owing to cooking being done in same, or other cause ....	4	5	1
Iron over bunks unsheathed ....	3	—	8
Miscellaneous leakages into quarters ....	50	22	106
Paint and oil lockers open to quarters ....	2	—	—
Ship's gear, stores, &c., kept openly in, or in communication with quarters. ....	2	7	1
Ventilation inefficient or ventilators defective..	29	5	3
CONDITION OF DECKS.			
Accumulations of dirt and refuse about decks..	25	—	—
HEATING.			
Stoves and stove pipes defective ....	5	3	20



	Steam Ships.	Sailing Vessels	Flats, & Barges
OVERCROWDING.			
and uncertified accommodation occupied . . . .	9	2	1
STORAGE OF FOOD.			
Lockers without doors . . . . .	11	—	—
Lockers requiring cleansing, limewashing, painting, repairing, &c. . . . .	—	—	5
Lockers not ventilated . . . . .	—	—	1
No lockers provided . . . . .	—	—	1
STORAGE OF WATER.			
Water tanks, &c., requiring cleansing . . . . .	42	—	7
„ not accessible for cleansing . . . . .	—	—	1
Water tanks, casks, &c., in a defective condition.	4	4	21
No water receptacle . . . . .	—	—	1
WATER CLOSETS.			
Flushing apparatus defective . . . . .	51	—	—
Flush and soil pipes defective . . . . .	20	—	—
Pans, urinals, &c., in a foul or defective condition	16	—	1
Closets in foul condition . . . . .	8	—	—
„ requiring limewashing . . . . .	4	—	—
„ deficient in light or ventilation, or both . .	10	—	—
„ doors and seats absent or requiring repairs	2	—	—
Insufficient accommodation or no accom- modation provided . . . . .	3	5	1
Totals . . . . .	591	81	357

SHIPPING ENTERING THE PORT DURING THE YEAR.

	Number.	Tonnage.	Number inspected.	Number reported to be defective.	No. of Orders issued.
Foreign	{ Steamers .....	1,622,012	796	239	..
	{ Sailing Vessels .....	6,451	33	13	..
	TOTAL FOREIGN ...	1,628,463	829	252	..
Coastwise	{ Steamers .....	522,832	620	165	1
	{ Sailing Vessels .....	17,295	*566	234	7
	TOTAL COASTWISE .	540,127	1186	399	8
	TOTAL FOREIGN AND COASTWISE	2,168,590	2015	651	8

\* This includes Flats and Barges engaged in Inland Navigation.

LIST OF PORTS TRADING REGULARLY WITH THE PORT OF  
MANCHESTER, TOGETHER WITH CHIEF IMPORTS  
FROM, AND EXPORTS TO, SUCH PORTS.

COASTWISE.

PORT.	IMPORTS.	EXPORTS.
Belfast .....	Potatoes, flax, cordage, linen goods.	Cottons, ironwork, machinery, motor cars.
Cork .....	Bacon, eggs, butter, cattle, tractors.	General, motor cars.
Dublin .....	Cattle, sheep, pigs, stout, biscuits, bacon.	General, motor cars.
Glasgow and Greenock.	Sugar, oatmeal, iron and ironwork.	Cotton goods, chemicals.
London .....	General (chiefly foods), cement, cables, tea and Australian tranship goods.	Manchester goods.

FOREIGN.

PORT.	IMPORTS.	EXPORTS.
Adelaide .....	Wheat, wool, meats, copper bars.	Machinery, Manchester goods, wire.
Alexandria .....	Cotton, cotton seed, eggs, oranges.	Machinery, paints, hard- ware, cotton goods, coal.
Amsterdam .....	Margarine, bacon, farina, condensed milk.	Cotton and woollen goods, machinery.



LIST OF PORTS TRADING REGULARLY WITH THE PORT OF MANCHESTER,  
TOGETHER WITH CHIEF IMPORTS FROM, AND EXPORTS  
TO, SUCH PORTS.—*Continued.*

PORT.	IMPORTS.	EXPORTS.
Antwerp .....	Steel, cement, glassware.	Chemicals, cotton, linen and woollen goods.
Auckland .....	Frozen meat .....	Machinery, Manchester goods, wire, salt.
Bahia Blanca and other River Plate Ports.	Grain .....	....
Baltimore .....	Grain, apples, starch, steel, etc., hardwoods.	Manchester goods, ore.
Bergen .....	Canned fish .....	Manchester goods.
Beyrout .....	....	Cotton goods, machinery.
Bluff, N.Z. ....	Frozen meat, grain, cheese	Manchester goods, machinery, wire.
Bombay .....	Ore, wheat .....	Manchester goods, machinery, chemicals, paints
Bordeaux .....	Brandy, wines, resin, aloxite ore.	Coal, cotton and woollen goods, machinery.
Boston, U.S.A. ....	Bacon, lard, canned meats, cotton, grain, leather, apples.	Paper stock, machinery, Egyptian cotton.
Botwoodville .....	Paper and pulp .....	....
Bremen .....	General goods .....	....
Brisbane .....	Frozen meat, canned meats, grain, wool.	Manchester goods, machinery, wire.
Brunswick, Ga. ....	Cotton .....	....

LIST OF PORTS TRADING REGULARLY WITH THE PORT OF MANCHESTER,  
TOGETHER WITH CHIEF IMPORTS FROM, AND EXPORTS  
TO, SUCH PORTS.—*Continued.*

PORT.	IMPORTS.	EXPORTS.
Buenos Aires .....	Grain, meats .....	....
Calcutta .....	Tea, coconut oil, hemp ..	Manchester goods, machinery, salt.
Christiania .....	Timber, paper, pulp ....	Manchester goods, machinery.
Constantinople, Levant and Black Sea.	Grain, dried fruits .....	Cotton goods, machinery, hardware.
Cienfuegos .....	Molasses .....	....
Colombo .....	Tea, desiccated coconut	Manchester goods.
Dalny (Manchuria) ..	Wheat .....	....
Dantzig .....	Timber .....	Cotton waste, machinery.
Drammen .....	Paper and pulp .....	....
Dunedin .....	Frozen meats .....	Manchester goods, machinery, salt, ironwork.
Dunkirk .....	Pig iron .....	Coal tar products, cotton goods, machinery.
Galveston .....	Cotton, grain, timber, phosphate rock.	....
Geelong .....	Wheat .....	Manchester goods.
Gefle .....	Timber .....	....
Genoa .....	Lemon peel, etc., olive oil, essences.	Pitch, cotton goods.

LIST OF PORTS TRADING REGULARLY WITH THE PORT OF MANCHESTER,  
TOGETHER WITH CHIEF IMPORTS FROM, AND EXPORTS  
TO, SUCH PORTS.—*Continued.*

PORT.	IMPORTS.	EXPORTS.
Ghent .....	Steel .....	Chemicals, cotton and woollen goods, machinery.
Gothenburg .....	Paper, pulp, timber .....	Chemicals, cotton goods, machinery.
Halifax, N.S. ....	Grain, apples, timber....	Manchester goods, salt.
Halmstad .....	Timber .....	....
Hamburg .....	Sugar, toys, pianos, enamelware.	Cotton waste, cotton goods.
Helsingfors .....	Timber, paper, pulp .....	....
Hobart .....	Apples, pears .....	Manchester goods, machinery.
Huelva .....	Iron ore .....	....
Jaffa .....	Oranges.....	Cotton Goods
Kotka .....	Timber, paper, pulp .....	....
Karachi .....	Wheat .....	....
Leghorn .....	Fruit, marble .....	Cotton and woollen goods
Lyttleton .....	Frozen meat .....	Manchester goods, machinery.
Malta.....	Potatoes (seasonal) .....	Machinery and cotton goods.
Melbourne .....	Wheat, frozen meats, wool	Machinery, wire, chemi- cals, cotton and woollen goods.
Mobile .....	Timber .....	....



LIST OF PORTS TRADING REGULARLY WITH THE PORT OF MANCHESTER,  
TOGETHER WITH CHIEF IMPORTS FROM, AND EXPORTS  
TO, SUCH PORTS.—*Continued.*

PORT.	IMPORTS.	EXPORTS.
Montreal .....	Grain, timber, cheese, bacon, lard, flour.	Manchester goods, machinery, earthen- ware, paints, salt.
Naples .....	Lemons, peel in brine, marble.	Manchester goods.
Narvik .....	Ore .....	....
New Orleans .....	Cotton, oil, timber, grain.	....
New York .....	Grain, bacon, flour, cotton, tobacco, motors and parts.	Cotton, linen and woollen goods, paper stock.
Norfolk, Va. ....	Cotton, tobacco .....	....
Pensacola .....	Timber .....	....
Philadelphia .....	Flour, bacon, tobacco, motors and parts.	Cotton, linen and woollen goods, chemicals.
Pomaron .....	Iron ore .....	....
Port Arthur (Texas) .	Oil .....	....
Port Chalmers .....	Frozen meat .....	Manchester goods, machinery.
Quebec .....	Timber, grain .....	Manchester goods, salt.
Riga .....	Timber .....	Cotton, machinery.
Rosario .....	Grain .....	....
Rotterdam .....	Dyes, preserved vege- tables, condensed milk, margarine, strawboards, chemicals, sugar.	Manchester goods, woollen goods, cotton yarn and waste.

LIST OF PORTS TRADING REGULARLY WITH THE PORT OF MANCHESTER,  
TOGETHER WITH CHIEF IMPORTS FROM, AND EXPORTS  
TO, SUCH PORTS.—*Continued.*

PORT.	IMPORTS.	EXPORTS.
Rouen .....	Sand, sugar, cotton waste.	Machinery, cotton and woollen goods.
Savannah .....	Cotton .....	....
Skien .....	Paper and pulp .....	....
St. John, N.B. ....	Timber .....	Manchester goods, machinery, salt, ore.
Sydney, N.S.W. ....	Frozen and canned meats, wool, copper bars, pig lead.	Manchester goods, wire, machinery.
Tampico .....	Oil .....	....
Treport .....	Flints, cotton waste ....	Machinery, cotton and woollen goods.
Tripoli (Syria) .....	....	Machinery, cotton goods.
Tunis .....	....	Machinery, cotton goods.
Valencia .....	Oranges, onions, rice, tomatoes.	....
Wellington .....	Frozen meats, cheese, wool.	Manchester goods, machinery, salt.

REPORT ON THE ADMINISTRATION OF THE CANAL  
BOATS ACTS, 1877—84.

For the Year ended 31st December, 1920.

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(1) Two Inspectors have been appointed by the Authority to carry out the provisions of the Canal Boats Acts, viz. :—

HENRY ATKINSON, for Section A (Manchester to Latchford) ;  
WALTER RICHMOND, for Section B (Latchford to Eastham).

Both Inspectors have the Certificate of the Royal Sanitary Institute.

No Inspector is required to devote his whole time to the duties of inspections under the Canal Boats Acts. Their primary duty is the supervision of shipping registered under the Merchant Shipping Acts, and they are only required to inspect canal boats at such times as they can spare from their other duties.

For the purposes of administration, the Port is divided into two sections, viz. :—from Eastham to Latchford, including Widnes and Warrington, with headquarters at Runcorn, and from Latchford to Manchester, with headquarters at Manchester. Each section is under the control of an Inspector, who is directly and solely responsible to the Medical Officer of Health for the proper supervision of his district.

A motor boat is in daily use on the lower reaches of the canal, and this enables the Inspector to keep under constant supervision canal boats using the Port at various points.

(2) During the year there has been a decrease of 15 inspections compared with those of the previous year. On the Runcorn section of the canal 432 inspections were made, showing an increase of 4 from the previous year's number. On the Manchester section 46 inspections were made, against 65 during the previous year, a decrease of 19.



The number of boats inspected, together with those discovered infringing the terms of the Canal Boats Acts, since the Authority undertook this duty, are as follows :—

Year.		Number Inspected.	Number Defective.	Percentage.
1903	..	191	77	40·30
1904	..	230	105	45·65
1905	..	209	132	63·15
1906	..	115	73	63·46
1907	..	84	55	75·47
1908	..	150	67	44·66
1909	..	257	101	39·29
1910	..	230	87	37·82
1911	..	307	127	41·36
1912	..	254	89	35·03
1913	..	432	159	37·03
1914	..	382	122	31·41
1915	..	311	79	25·40
1916	..	409	112	27·38
1917	..	596	166	27·85
1918	..	729	203	27·84
1919	..	493	170	34·48
1920	..	478	129	26·98

The proportion of defective boats to the total number inspected during the year amounted to 26·98 per cent., being 7·5 per cent. lower than in 1919.

(3) The following is a summary of the insanitary conditions and contraventions of the Acts found during the year :—

(a) REGISTRATION.

Not registered .....	2
Registration incorrect .....	8

(b) NOTIFICATION OF CHANGE OF MASTER ..... 0

(c) CERTIFICATES.

Registration certificate absent .....	26
„ „ dilapidated .....	1

(d) MARKING.

No marks .....	2
Marking indistinct or incorrect .....	7

(e) OVERCROWDING ..... 4

(f) SEPARATION OF SEXES (want of) ..... 4

(g) CLEANLINESS AND REPAIRS.

Cleansing of cabins required .....	2
Cabins, etc., dilapidated and repairs required ....	22
Miscellaneous leakages into cabins .....	79
Bulkheads defective allowing communication with holds .....	4

(h) VENTILATION AND LIGHTING.

Ventilation inefficient and ventilators defective..	8
Insufficient lighting .....	4

(i) PAINTING.

Cabins, lockers, berths, etc., requiring painting ..	51
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## (j) PROVISION OF WATER CASK.

No water vessel or vessel not of sufficient capacity.	4
Water casks decayed and water vessels requiring repairs .....	29

## (k) REMOVAL OF BILGE WATER.

Bilge Pumps absent .....	0
„ „ defective .....	1
Bilges requiring cleansing .....	0

## (l) NOTIFICATION OF INFECTIOUS DISEASE .....

0

## (m) ADMITTANCE OF INSPECTOR .....

0

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Total .. 258

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The proportion of infringements per boat works out at 2'0.

(4) No prosecutions were undertaken during the year.

(5) The usual steps have been taken to secure compliance with the Acts. In all cases complaint notes have been promptly served upon the owners, and if not attended to at the end of the prescribed number of days, a postcard asking for return of the certificate has been duly forwarded.

(6) No cases of Infectious Disease have been notified on any canal boat during the year. One canal boat had on board a mild case of tubercular phthisis, which had been notified to another Authority.

(7) No boats have been detained for cleansing or disinfection.

(8) and (9) The Authority is not a Registration Authority.



RETURN SHOWING THE NUMBER AND TONNAGE OF VESSELS WHICH ARRIVED IN THE PORT OF  
MANCHESTER IN 1920.

	Manchester.		Warrington.		Runcorn.		Ellesmere Port.		Totals.	
	No.	Tons.	No.	Tons.	No.	Tons.	No.	Tons.	No.	Tons.
Foreign {	847	1,561,426	23	18,882	59	33,409	13	8,295	942	1,622,012
	1	81	..	..	25	5,041	7	1,329	33	6,451
	848	1,561,507	23	18,882	84	38,450	20	9,624	975	1,628,463
Coastwise {	1102	395,786	..	..	525	64,285	348	62,761	1975	522,832
	8	1,011	..	..	172	15,465	9	819	189	17,295
	1110	396,797	..	..	697	79,750	357	63,580	2164	540,127
GRAND TOTAL .	1958	1,958,304	23	18,882	781	118,200	377	73,204	3139	2,168,590

The above information has been kindly supplied by H.M. Collector of Customs for the Port.











